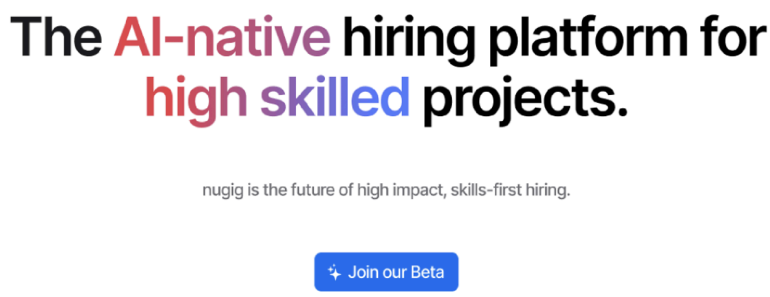

Audio Discussion: https://tinyurl.com/y6aerr3j

Yogesh, CEO of nugig Corp., was driving home after a productive team meeting, reflecting on the company's next big step. nugig is a two-sided platform that matches highly skilled individuals to short-term, part-time problem-solving projects. Instead of centering on traditional job roles or employment categories, nugig treats each opportunity as a discrete "problem to solve."

While most online talent platforms have historically focused on standardized tasks that can be outsourced easily and managed remotely, nugig was built for a different kind of challenge—more complex, high-skill problems that require creativity, judgment, and deep expertise. These projects are scoped to a "credit card-sized" scale: manageable, focused, and high-value. After testing a wide variety of problem types, the nugig team made a strategic decision to initially focus on technology-related challenges—specifically in AI, data science, software engineering, robotics, and automation. The goal is to make advanced technical skills more accessible to companies that often struggle to find or afford such talent, while creating flexible, career-shaping opportunities for members of the Northeastern University (NU) network, including experienced and trained students, as well as a massive and formidably trained global alumni network.

As Yogesh drove, he felt a deep sense of gratitude for the long line of contributors who had shaped nugig across its early research and experimental phases (see Appendix)—and he hoped that some might wish to perhaps return to contribute to nugig, now that the venture was at the cusp of market contact. But, at the same time, several broader strategic questions, beyond immediate execution, crept into his mind. These are listed at the end of the case study.

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[1] This case was prepared by Prof. Kevin Boudreau kevin@northeastern.edu, April 2025.

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Reimagining Online Labor Platforms for Frontier Work

Over the past decade, platforms like **Upwork**, **Fiverr**, **Freelancer.com**, and **Toptal** have dramatically expanded access to freelance work, especially for tasks that are clearly scoped and repeatable—graphic design, content creation, basic web development, and data entry. Similarly, a growing wave of student-focused platforms—such as **Parker Dewey**, **Riipen**, **Forage**, and university-led micro-internship programs—have emerged to connect students with employers for short-term projects, often framed as experiential learning or résumé-building opportunities.

Together, these platforms have helped digitize parts of the labor market, offering new ways to transact across boundaries of geography and institution. But while they've succeeded in lowering the barrier to entry for routine and learning-oriented work, they've largely failed to serve a different and increasingly important segment of the labor market: **high-skill, problem-based work that requires depth, creativity, and technical judgment**.

Ironically, even as these platforms—and the broader wave of digitization, automation, and AI—promised to make labor markets more efficient, they have often done the opposite. On many platforms, jobseekers now flood listings with mass applications, gaming keyword filters and overwhelming employers. Employers, in turn, are left to sift through superficial signals, often relying on crude résumé parsing or overwhelmed by volume. The vast online reach of these platforms hasn't solved the core challenge of matching the *right person to the right problem*—and in many cases, it has only amplified the noise.

AI, which might seem a natural solution, is often bolted on as a patch: resume parsing tools, search enhancements, or generic LLM-powered chatbots that lack deep integration with platform workflows or user needs. Most platforms still operate on the same old logic—post a job, get applications, hope for the best.

nugig was designed from the ground up to break this pattern. It does not simply digitize existing roles or repackage internships. Instead, it introduces a new *unit of work*: the **scoped, high-skill problem**. Employers post real, bounded challenges—often technical or exploratory in nature. Solvers respond with tailored proposals, not résumés. And engagements are structured as part-time projects with clear deliverables and defined timelines, scoped to manageable price tiers.

This model represents more than a technological advancement—it's a rethinking of how complex knowledge work can be organized and exchanged online. nugig combines **careful market design**, **structured project definition**, and **AI-driven workflows** to support end-to-end matching—from problem articulation to candidate selection and delivery. And by operating within the **Northeastern University network**—a trusted community of students, alumni, researchers, and employers—it brings together participants with shared context, reputation, and standards.

In contrast to platforms that treat labor as commoditized or task-based, nugig opens up a new part of the labor market that has, until now, been underserved and under-designed. It's not for

microwork or generic internships. It's for solving real problems—quickly, affordably, and with purpose.

Existing Alternatives for Delivering Problem Solutions

nugig was designed for a specific kind of work: short-term, part-time, high-skill problem-solving by highly capable Northeastern students and alumni—many already working full-time or advancing in lifelong careers. What made nugig distinctive wasn't just the gig problem-to-solve format, but the shared professional, educational, and social context connecting both talent and employers within the same trusted network. At the same time, the nugig team was well aware that there was already a long list of approaches for attempting to solve problems.

Internal Traditional Hiring by Employers

The most obvious and natural route for addressing non-trivial problems is to apply highly skilled internal employees—because employment relationships are built for this. These long-term arrangements enable deep alignment with organizational goals, firm-specific knowledge accumulation, and ongoing investments in human capital. They are institutional frameworks designed to support adaptation, trust, and complex problem-solving over time. (Much of economic theory of hand-in-glove employment relationships of workers within firms stress this need of workers to engage in productive effort and adaptation in a context where not every single action needs explicit contracting and direction, and where discretion and judgment plays an important role.)

Historically, these problems have not been served well by online job platforms. Most short-term gig and freelance marketplaces are built for standardized, low-trust, modular tasks—not for high-value challenges requiring judgment, context, and iteration. As a result, the most important problems have typically stayed inside the firm, addressed by trusted employees—or, when internal capacity is lacking, outsourced to expensive consultants.

Expert Consulting Firms

When internal capacity or knowledge capability is constrained, organizations often turn to high-skilled consultants to replicate some degree of the attractive features of internal hiring, but tapping into additional advantages. These firms offer more than just technical expertise—they bring experience, discretion, and the ability to align with client goals in fluid, evolving contexts. While governed by formal contracts, the most effective consulting relationships rely on trust, relational capital, and repeated interaction—similar to some degree to internal hiring. Consultants frequently make firm-specific investments, develop long-term familiarity with an organization and its managers, and operate with a level of autonomy and judgment that mirrors internal teams. This adaptability and depth make consulting a go-to solution for many complex problems—but one that often carries a significant cost. For example, a number of firms can offer organization-transforming services in digitization, artificial intelligence, automation, and software engineering, while also layering in management and strategy experts and industry-specific experts—including Accenture, Palantir, Capgemini, Deloitte, Cognizant, and many more.

Co-op Students and Interns

Co-op students and interns occupy a distinct space in the labor market—on a spectrum towards full-time employees, but with distinct characteristics and goals. For employers, these arrangements can offer a cost-effective way to access emerging talent, particularly for open-ended or developmental work where tasks do not need to be rigidly specified in advance. Students are typically motivated by a mix of learning goals, résumé development, and the potential to transition into full-time roles, which can produce some short-term alignment with employer needs. In this way, co-ops can serve as a form of extended screening.[2]

Co-op hires can adapt over time, work on (somewhat) open-ended problems, and contribute meaningfully without needing every task to be fully specified in advance. They are typically hired into "roles" rather than in response to a specific problem definition. These arrangements often require lower salary costs but necessitate substantial recruiting effort every 4 or 6 months. The benefits of flexibility and short-term commitment may trade off against certain advantages of traditional internal employment.

The top co-op programs in North America are the University of Waterloo (over 20,000 co-op students; founded in 1957; leading fields: engineering, computer science, mathematics, and business), Northeastern University (approximately 10,000 co-op students; founded in 1909; with students across a wide variety of fields and disciplines in engineering, sciences, business, humanities, and social sciences), the University of Cincinnati (around 4,900 students; founded in 1906; leading fields: engineering, applied science, and business), and the Georgia Institute of Technology (over 4,100 students; founded in 1912; leading fields: engineering and computer science).

Traditional Online Job Matching Marketplaces

Platforms like Upwork, Fiverr, and Freelancer.com have made it easier than ever to access freelance talent—particularly for repeatable, modular tasks that were somewhat well-understood and definable without much need for adaption or discretion. For example, a number of such platforms focused on basic tasks (e.g., taskrabbit, fiverr), whereby simply tasks could be described and evaluated as either completed satisfactorily or not. Other platforms like Upwork and Freelancer offered spot markets to complete projects, most often hiring from countries with lower labor costs. This work go more sophisticated, including data entry, data base construction, clerical work, and relatively standard form IT projects (develop a website or execute an app design). These platforms had traditionally been limited in terms of supplying novel problem solving or other tasks where problems did not follow relatively well understood "templates."

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[2] Additionally, co-op programs often provide an accessible pathway for international students to gain work authorization in the United States through Curricular Practical Training (CPT), which allows F-1 visa holders to engage in employment that is integral to their academic curriculum. This mechanism not only facilitates valuable work experience for international students but also expands the talent pool available to employers participating in co-op programs.

Micro-Internship Platforms

As universities increasingly prioritize experiential learning, many have partnered with third-party platforms like Parker Dewey, Forage, and Riipen to facilitate short-term, project-based opportunities for students. These micro-internship platforms aim to bridge the gap between academic learning and practical experience by connecting students with real-world projects.

The market leader in this space, Parker Dewey, for example, has established partnerships with over 800 colleges, universities, and non-profit associations across the United States, enhancing career readiness and early-career recruiting through short-term, paid, professional projects. Parker Dewey, for instance, offers paid micro-internships that typically range from 10 to 40 hours of work, with average compensation between $200 and $600 per project (average $402). All assignments are structured as independent contract work, and Parker Dewey ensures that 90% of the project fee goes directly to the student. Likewise, Riipen serves 400 colleges.

One concern, however, of these types of micro-internships was they had failed to achieve any scale or build markets for any one institution. Parket Dewey did not report institution-specific details. However, the company reports revenues of only $3.4MM. If the average project were to yield roughly $50 of revenue, this implies roughly 8,500 projects per year, or 10.6 per institution. This lack of adoption raises questions and cautions about what is not quite working about online labor markets for project-based work of this kind. These third-party platforms also increasingly pooled all demand and supply for gigs from all universities and colleges, leading to less differentiation by college and handing over employer and worker data to third-parties.

Artificial Intelligence Solutions

As artificial intelligence (AI) tools become more sophisticated, they are increasingly capable of augmenting internal teams by automating tasks traditionally outsourced to consultants or temporary staff. This shift enables organizations to boost productivity while reducing reliance on external resources.

In software development, AI coding assistants such as GitHub Copilot, Amazon Q Developer, and Tabnine are transforming workflows by autocompleting code, generating tests, and offering real-time suggestions—thereby lowering the demand for outside development support. In operations and support functions, AI platforms like Moveworks use natural language understanding and machine learning to resolve workplace requests, streamlining IT and HR services. Meanwhile, companies like UiPath are advancing from traditional robotic process automation to agentic AI, blending deterministic automation with non-deterministic capabilities to handle more complex tasks, reduce human involvement, and enhance decision-making.

At the same time, expert human input remains essential—not only to build and adapt these tools, but to identify effective use cases. AI is becoming both a substitute for and a complement to human problem-solving.

nugig Founding Origins

What would later become nugig originally emerged from Northeastern's IoT Open Innovation Platform initiative. That platform—designed to explore global product development and collaboration—grew to over 5,000 users across all continents before the COVID pandemic. Initial brainstorms and sketching about a new kind of "job shop" that could provide frontier talent across a rapidly evolving tech stack had been debated as a skunk works among members of the research team.

When the IoT platform was shuttered during the pandemic, a subset of the team carried the concept forward, repurposing it as a research platform to explore alternative market designs for high-skilled labor and AI-enabled matching. The earliest research and design of the concept was carried out by a small team working remotely during the pandemic.

This work led to several large-scale experiments and academic research efforts, building toward a strong proof of concept. Additional testing based on the use of AI followed, as a new generation of research assistants helped further develop the platform's core ideas and functionality.

As the research matured, it began attracting institutional interest from Northeastern's Provost's Office and the School of Business as a potential extension of the university's experiential learning model—especially as traditional co-op pathways came under strain due to global expansion, tighter hiring markets, and macroeconomic uncertainty. The team's strength in low-cost experimental platform development—and its ability to engage talent at scale—positioned it as a promising path forward.

With modest support from the Provost's Office, co-op hiring, and additional funding from the D'Amore-McKim School of Business and the Ewing Marion Kauffman Foundation, the team developed and tested dozens of features. More recent contributors helped build and refine the platform's core technical capabilities in this phase.

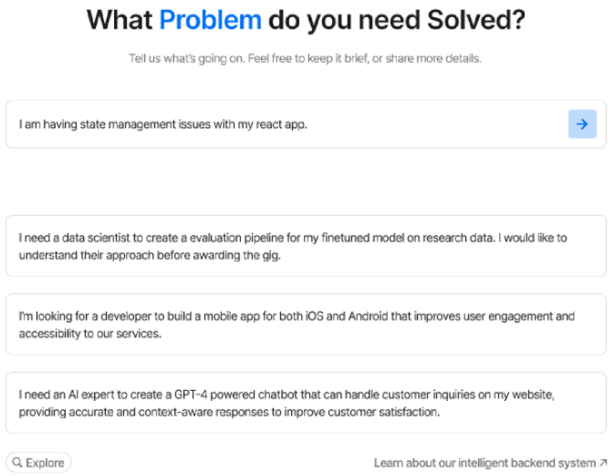
To translate these loose lab ideas that had been shared with the academic research world into something tangible and scalable, Yogesh led the formation of an independent venture. He secured the nugig.tech domain, filed for copyright protection, and built an "AI-first" platform from the ground up—drawing not just from research papers and strategy memos, but from the combined insights, experiments, and technical craft of dozens of contributors. The hope was that as the project began to scale, some of the original contributors might even return to the venture.

A Business Model for Spot Markets in Frontier Skills

Most platforms fail to match highly specialized talent to equally specialized problems. nugig takes a different approach by making the *problem* the unit of work.

Helping Employers Define the Problem

Employers often struggle to clearly define complex problems and what success looks like. nugig built platform-integrated AI tools to guide this process, enabling concise, actionable problem definitions—even when the goals are somewhat fuzzy.

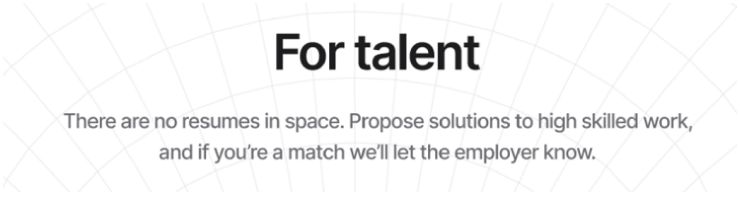


Fixed Scope for Clarity and Focus

Each engagement is scoped to fixed tiers—$1,000, $2,500, or $5,000—and capped at 45 days of part-time work. This ensures clarity, manageable complexity, and separation from larger projects.

Matching Talent Without Resumes

Rather than relying on resumes, nugig independently compiles skills profiles (e.g., from LinkedIn) and requires applicants to propose a brief, tailored approach to solving the posted problem. This allows fit to be assessed based on actual problem-solving capability, not keywords.

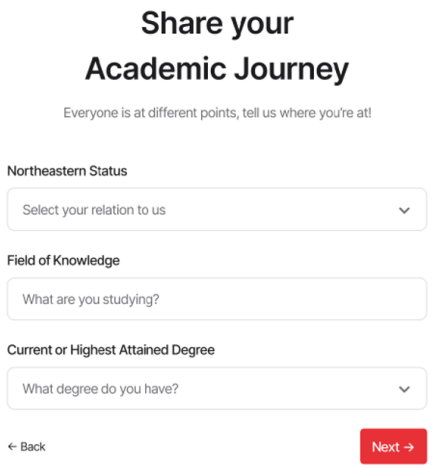


Solving the "Spamming" Problem

Instead of mass applications, nugig uses a sequential, AI-assisted process to invite candidates one at a time. Candidates confirm interest, availability, and submit a proposed solution. Employers receive 1–4 qualified options and can either start immediately or schedule a video call before selecting.

Creating Value Within a Trusted Network

By focusing on the Northeastern University network—300,000+ students, alumni, faculty, and partners all around the world—nugig leverages shared standards, relationships, and trust. Unlike generic gig platforms, participants often have common experiences, mutual contacts, or geographic proximity. The result: higher trust, better collaboration, and more meaningful work.



What Is a (nu)gig?

Each nugig project is scoped around five key features:

- A clearly defined problem, structured with the help of platform AI
- A high-skill challenge that requires depth, creativity, and domain knowledge
- A finite, part-time commitment (typically 20–40 hours over several weeks)
- Streamlined payments, eliminating procurement friction
- Proposal-driven matching, where candidates are selected based on tailored solution plans

This structure makes it easy for both parties to understand expectations—and delivers real impact in a manageable format. **(See the Appendix for illustrative examples.)**

The Hypothesis: A Two-Sided Value Proposition

nugig aims to deliver meaningful value to both sides of the market. For employers, it provides fast, low-friction access to advanced technical skills—without the cost, delay, or complexity of traditional hiring or consulting engagements. Importantly, nugig is not built for large tech firms with in-house AI labs or elite internal pipelines. Instead, it is designed for the 99% of companies that struggle to access cutting-edge talent or flexibly reallocate their own employees. These firms may lack the budget, scope, or hiring justification for full-time roles, but still need expertise to address specific challenges.

For these employers, nugig offers a chance to test new ideas, solve real problems, and tap into hard-to-find skillsets—at accessible price points and with minimal commitment.

On the talent side, nugig appeals to a wide spectrum of individuals seeking impact, learning, and flexibility. Unlike traditional roles, a nugig is designed for solvers who are already in school, working full-time, or otherwise engaged. For most, the opportunity cost is low—it's not about

choosing between nugig and another job offer. It's about how to spend their evenings, weekends, or exploratory time in ways that are productive and meaningful.

Participants are motivated not just by income, but also by the chance to apply skills in the real world, grow their network, build a portfolio, or explore new sectors. For solvers looking to differentiate themselves, test career directions, or build safety nets, nugig offers a curated, low-friction pathway to do so.

The core bet is that, when the right problem meets the right person, extraordinary results can emerge—often more efficiently and affordably than traditional hiring allows.

An AI-Driven Workflow & Operating Model

nugig's value proposition is centered around solving *complex, high-skill problems* through *fast, part-time, project-based engagements*. Delivering this experience at scale—and with low friction—requires a fundamentally different technology stack than traditional job boards or gig marketplaces. Artificial intelligence (AI) and data science are not simply add-ons, but core enablers of the platform's unique business model.

The following outlines how AI is embedded across the nugig workflow to support the platform's three pillars:

1. **Problem-based work as the unit of matching**
2. **Short-term, high-value engagements with defined scope and outcome**
3. **Skills-as-a-service from a trusted, high-talent network**

To be able to open up high-skilled problem solving to online spot market transactions—and make it scaleable—nugig has needed to integrate AI tightly within its workflow. This is a combination of LLM and ML-based approaches.

Delivering this experience at scale requires a fundamentally different technological foundation. AI is embedded throughout nugig's workflow, not as a bolt-on, but as an enabler of the platform's three core design principles: problem-based matching, scoped engagements, and trusted network-driven participation.

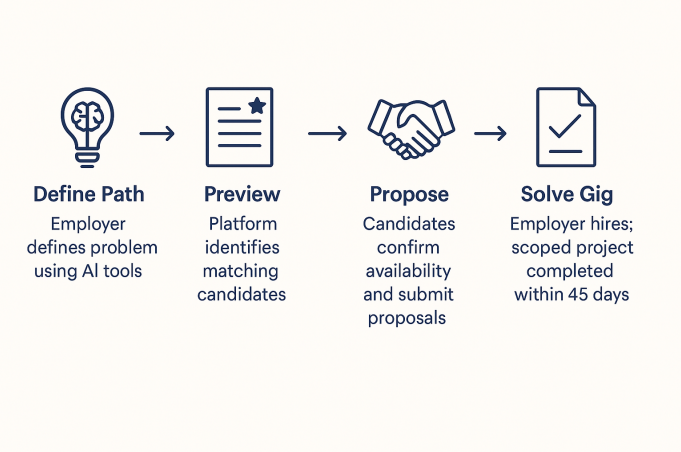
AI helps employers articulate what they need, even when they're not sure how to describe it. It recommends price tiers, classifies problem types, and translates vague challenges into structured briefs. On the talent side, AI maps latent capabilities from public data (e.g., LinkedIn, portfolios) and matches candidates to problems using a semantic skill graph that goes beyond surface-level keywords.

When proposals are submitted, AI evaluates their clarity, plausibility, and alignment, and summarizes them for employers in plain language. This ensures that decision-making stays focused and fast. The system also sequences outreach to avoid candidate spam and manages availability and alignment checks automatically. For repeat hiring, employers can revisit past talent pools, building relationships over time.

How It All Works

The workflow is simple, guided, and optimized for quality.

1. **Employers define their problem** using AI-driven tools.
2. **The platform identifies matching talent**, inviting candidates one by one.
3. **Candidates confirm availability and submit tailored proposals of how they would approach the problem within their available time.**
4. **Employers review 1–4 pre-vetted qualified submissions** and choose to hire or meet candidates briefly.
5. **Once hired, the project begins.** Work is scoped to 45 days or fewer, with payment processed securely and held until completion



Current Status: Employer-Side Trials

nugig has already validated its talent supply. In its first year, the team engaged over 9,000 participants from the NU network, demonstrating the ability to attract, match, and activate highly skilled solvers across disciplines. With that success, the focus has shifted to the employer side.

Over the next phase, nugig will run structured "market contact" trials with roughly 100 carefully selected organizations—from startups and labs to nonprofits and established businesses. These partners will help test usability, pricing clarity, hiring workflows, and candidate interactions. Each engagement will offer feedback and behavioral insights to shape future iterations.

Each employer engagement in the upcoming market contact trials will serve as a high-value learning opportunity. These interactions are designed not to drive mass adoption at this stage, but to surface insights that will shape the next evolution of nugig's product and business model. The

aim is to understand how employers experience the platform in practice—how they define problems, navigate the interface, interpret AI-driven recommendations, and ultimately decide to engage with talent.

The team is especially focused on testing several core hypotheses: whether the employer-facing interface is intuitive and easy to navigate; whether the tiered gig model—$1K, $2.5K, and $5K—feels clear, fair, and actionable; and how well the AI-driven tools for talent matching and proposal summarization perform in real-world conditions. These trials will also explore softer but critical behavioral patterns, such as whether employers prefer synchronous calls with candidates or feel comfortable selecting based on written proposals alone, and whether they lean toward credit card-based transactions or traditional HR onboarding.

Beyond these specific dimensions, the broader goal is to better understand the kinds of problems employers are motivated to post—and where they hesitate or struggle. Every data point, piece of feedback, and observed friction will help nugig refine how it communicates its value, improves user experience, and aligns platform structure with actual market behavior.

In essence, these trials are as much about listening as testing—capturing the nuance of real employer behavior to guide how nugig evolves from a promising prototype into a scalable, high-trust marketplace for problem-solving talent.

Lingering Strategic Questions

For all the satisfaction Yogesh felt as nugig advanced—from the maturing product and workflow to the promising early market trials—he couldn't shake the sense that several "big, fat" questions still hung in the air. These weren't just matters of execution or polish. They were questions about direction, identity, and the shape of the platform's future.

As he drove home, Yogesh found himself replaying the hypotheses that had driven nugig's development: that employers facing high-skill challenges would value flexible, short-term problem-solving more than traditional hiring; that talented solvers, especially those in the Northeastern network, would jump at the chance to take on impactful work without overcommitting. These were good starting points—but they still needed to be tested, sharpened, and perhaps reimagined. And so, a number of unresolved questions began turning over in his mind.

A. Should nugig Remain Tightly Integrated with Northeastern—or Strike a More Independent Path?

From its inception, nugig had been deeply tied to Northeastern's innovation ecosystem. The early backing from the Provost's Office, its alignment with the co-op model, and its natural

resonance with experiential learning gave the platform both credibility and a built-in user base. Integration with the university's curriculum, career services, or co-op infrastructure might enable faster adoption and more legitimacy on campus—especially as the university scales across cities and continents.

But the flip side worried him. Greater integration could come with institutional constraints. It might narrow nugig's ability to serve startups, labs, or alumni who didn't fit neatly into a semester calendar. And there were practical barriers, too: Northeastern had yet to obtain federal approvals to allow international students to take part in short-term gigs. This meant a large portion of the student population might be effectively excluded, at least in the near term. Perhaps, then, nugig should shift greater emphasis—at least for now—to domestic students and alumni.

Multiple offices and departments at Northeastern had attempted to partner with 3rd party platforms to offer micro-internships in the past and each had failed to scale a successful platform. Further, there was a concern that every time Northeastern contracted with an external third party (who sold the same platforms to all other universities) that the university's competitive advantage in experiential education (and data and employer leads) were just leaking out to these third parties and other schools using their platforms. In principle, this might be a good reason for nugig to stick close to Northeastern administration and to tightly bind nugig to the university. However, the team worried that this lack of coordination across the university could create a problem of lack of coherent efforts and messaging.

Was it better to pursue tight institutional embedding to gain momentum and scale in a known system? Or to keep nugig slightly at arm's length, to preserve agility and broader reach? And would users—students, alumni, or employer partners—value the platform as much without formal integration into academic calendars and programming?

B. What Is the Right Scope of Talent and Problem Types—and Should the Platform Be "Productized"?

Another question tugged at him: How broad should nugig's offering be, both in terms of skills and project types?

Early testing had invited participation across a wide range of disciplines and domains—from public policy to media to natural sciences. But for this next phase, the team had narrowed its scope to focus squarely on tech and engineering challenges: AI, data science, robotics, automation, and software. This focus offered clarity, but also raised new questions. Was even this narrowed scope still too broad? Or should nugig double down further—perhaps only offering data science gigs or AI applications? On the other hand, would being too narrow limit user growth and experimentation?

To help address the ambiguity employers might feel in defining their needs, Yogesh had floated the idea of "productizing" some of the gig offerings. Perhaps nugig could feature a skills marketplace with semi-standardized offerings—structured service bundles that talent could

propose in advance, almost like a storefront of ready-to-go capabilities. This might make the new model of work more legible to employers unfamiliar with scoping problems from scratch.

But would this approach dilute the custom, high-skill problem-solving core of nugig? Or could it provide a helpful "training wheels" format that increased adoption while preserving room for more open-ended gigs?

C. What Is the Right Approach to Scaling After the Market Contact Trials?

If the employer trials went well—and initial signals were promising—what came next? The idea of scaling up brought both excitement and anxiety.

Yogesh knew that promoting a new kind of platform was always challenging. nugig didn't just need to find users; it had to teach them a new way of engaging with talent and work. But perhaps the adoption challenge wasn't quite as steep as it seemed. After all, nugig already knew who its network was: Northeastern students, alumni, and employer partners. In principle, it could map the entire potential market on both sides—gathering names, emails, and affiliations before any full-blown marketing push even began.

Still, the questions loomed. What should the initial scale look like? How many active users were needed on each side for the platform to be sustainable? Should the rollout be geographically concentrated, perhaps focusing on Boston and a few key campuses? Or would it be smarter to go broad from the beginning?

And what was the best go-to-market strategy? Should the talent side begin wide open, or should nugig focus first on handpicking its top 100 solvers and ensuring every early gig was a resounding success? On the employer side, should onboarding be tech-driven and self-service—or would a high-touch "white glove" model be more effective in the short run?

What was the right blend of broad marketing and direct outreach? What ratio of human, AI, and digital interaction would build the most trust and traction? The answers to these questions would shape not only how fast nugig grew—but how well it grew.

D. Should nugig Introduce a Crypto-Based Token—and If So, When and How?

One final idea sat on the edge of Yogesh's mind: a blockchain-based token system.

The goal wasn't to replace real money or complicate core transactions. But what if nugig issued a coin—or point-based token—that lived on-chain and acted as a transparent record of reputation, contribution, and engagement? It could serve as an internal incentive system, allowing users to accumulate value through meaningful participation.

But even more provocatively, it could help sharpen the platform's feature set. If credits were tokenized, what kinds of behaviors should be rewarded? Completing successful gigs? Receiving strong evaluations? Recommending talent? Offering helpful guidance in a community forum? And could coins be redeemed for visibility, credibility, or promotion within the platform—perhaps even unlocking the right to launch your own "skills store"?

Yogesh imagined a system where users weren't just passive participants, but co-builders of the ecosystem—earning coin by contributing to its strength. But he also wondered: was now the right time to introduce this? Or would it add complexity before nugig had nailed its core value proposition? Would it distract from execution—or provide a clarifying framework for growth?

E. Edging towards More Fundamental Innovation?

As nugig reimagined the unit of work and addressed challenges like ghost jobs and mass applications, the team began to ask a deeper question: was this also the moment to rethink how people engage in a professional labor market? For two decades, online platforms have followed the same formula: post a job, collect resumes, sort through noise. nugig had already broken from that mold. But should it go further? Could early steps during launch—however small—begin to redefine the model more fundamentally?

The team resisted adding flashy features for their own sake or those that would distract from the core business of solving problems. But perhaps there were ways to enhance the core model while continuing to distance nugig from the limitations of traditional online job platforms. Several basic motivating ideas kept resurfacing. Yogesh couldn't shake the feeling that early users might benefit from a glimpse of a more innovative future. But should anything be done now?

- **Reversing the Flow**: Most platforms are built around "pull"—jobs are posted, talent applies. But could nugig also "push" talent forward? Could standout solvers be surfaced to employers even before a problem is formally defined? Could talent be discovered and considered proactively? How? Would this be useful?

- **Rewarding Talent**: nugig's AI matching engine was built to identify the right person from within the Northeastern network for a specific challenge. But early testing suggested that certain solvers might consistently be willing and able to solve problems—and that employers might seek them out repeatedly. Should the platform recognize and support a core roster of active, reliable contributors—without undermining the broader community? Could incentives, visibility, or status be used to reward high-performing talent while maintaining openness? More generally, was there a way to increase stickiness, loyalty, and joy among talent using the platform?

- **Sticky, Ongoing Employer Engagement**: nugig wasn't just a gig marketplace—it was a socially embedded, reputationally rich network. Could the platform encourage longer-term engagement beyond one-off gigs? For example: following solvers, watching project outcomes, or saving promising talent to a personal pool. Could this kind of low-friction engagement increase trust, activity, and value—without straying from nugig's core design?

- **A Lifelong, Two-Sided Network**: nugig members weren't static. A student solver today might be a hiring manager tomorrow. Someone hired for a project might later refer or hire someone else. Could nugig support this fluidity? Could it enable relationships to evolve over time—tracking reputation, surfacing shared history, or encouraging reciprocity across roles? Unlike traditional platforms, nugig's users weren't anonymous—they were part of the same university network. Could that fact be used more strategically?
- **Building on the Network as a Foundational Asset**: Unlike typical gig platforms, nugig is embedded in a known, trusted community—the Northeastern network. Could this shared institutional affiliation be used to unlock new forms of value? For example: allowing referrals and vouching mechanisms to strengthen trust and signal quality; showcasing shared connections and project history to reduce friction; or building lightweight reputation systems rooted in co-participation and past engagement. Could NU credentials, course affiliations, or experiential records be integrated to qualify talent in specific domains? Could the platform enable role-switching, reciprocity, and discovery in ways that generic platforms can't—by treating the NU network not just as a source of users, but as a strategic asset to be actively built upon?

These weren't features to rush into—or were they? Were there things that the dev team should be thinking about today to make its members overjoyed about getting involved? Or, were these distractions in the short run? If the team were to offer a glimpse of the future with more fundamental innovations, was it possible to do this incrementally—in small steps or features that would not be overwhelming, confusing, or distracting—and that would play to the strengths of the core model?

As Yogesh pulled into his driveway, he knew there were might not be immediate or obvious answers to these questions. But that was perhaps precisely why they mattered as strategic decisions. Each was potentially a fork in the road. All of them could potentially shape whether nugig could truly fulfill the promise of a new model for high-skill, part-time problem-solving—and build a network that not only worked, but *worked differently*.

Appendix: Examples of "Gigs"

• Build a predictive maintenance dashboard for factory equipment using historical sensor logs. [Hiring manager: Operations lead at a mid-sized manufacturer chose nugig over hiring a consultant due to budget constraints and interest in testing a project-first approach; Solver: Northeastern MS Data Analytics alum with experience in equipment reliability modeling, seeking flexible gigs while exploring startup ideas.]

• Prototype a natural language interface for an internal company FAQ, integrating a GPT-based backend. [Hiring manager: HR director with minimal technical background chose nugig for hands-on support and clearer scoping than Upwork; Solver: Final-year CS student who built similar tools in a campus project, looking to build portfolio credibility.]

• Analyze program participation data and propose improvements for an urban youth nonprofit. [Hiring manager: Nonprofit executive needed quick insights without hiring a full-time analyst; Solver: Public policy graduate with Python and Tableau skills, working full-time in research but seeking weekend projects aligned with mission-driven work.]

• Create a wireframe and low-fidelity prototype for a job search app targeted at gig workers. [Hiring manager: Sociology professor chose nugig to connect with practical tech talent to build an early-stage research demo; Solver: UX design student with a minor in psychology, looking for projects related to labor and equity.]

• Design a microservice that scrapes grant opportunity databases and filters them by eligibility. [Hiring manager: Research funding coordinator at a university lab needed fast MVP without formal procurement; Solver: Full-stack developer and alum seeking side projects in civic tech.]

• Conduct a lightweight cybersecurity review and propose low-cost improvements. [Hiring manager: Founder of a mental health startup wanted affordable expertise with high trust; Solver: Junior cybersecurity consultant from NU's co-op program looking to apply skills between contract roles.]

• Create a dynamic dashboard to track social media engagement and benchmark against competitors. [Hiring manager: Communications manager at a nonprofit found nugig more accessible than hiring a marketing firm; Solver: Marketing analytics student with HubSpot certification and aspirations in nonprofit comms.]

• Help blueprint and prototype a "smart campus" IoT pilot for classroom energy management. [Hiring manager: Campus sustainability officer needed domain expertise to validate grant requirements; Solver: PhD student in electrical engineering with IoT lab experience and seeking direct industry collaboration.]

• Evaluate potential cloud migration options for legacy database systems and write a transition plan. [Hiring manager: Small business IT manager turned to nugig to trial expertise before

longer-term hire; Solver: Recent graduate with AWS Solutions Architect certification and an interest in building consulting experience.]

• Build an interactive, visual storytelling webpage combining maps, text, and data visualizations. [Hiring manager: Journalism professor exploring digital-first course content; Solver: Digital media student with JavaScript and D3 experience interested in journalism-tech crossover.]

• Map the current competitive landscape for elder care tech and identify whitespace opportunities. [Hiring manager: Entrepreneur testing startup hypotheses before full-time launch; Solver: MBA student with consulting experience looking for insight-rich short projects.]

• Use GPT and open-source APIs to prototype a tool that generates customized lesson plans for ESL instructors. [Hiring manager: Adult education center director lacked technical team in-house; Solver: Applied AI master's student with prior edtech work aiming to specialize in GPT integration.]

• Create an internal web app that helps small business owners track quarterly tax obligations. [Hiring manager: Local chamber of commerce advisor wanted a quick tool for members; Solver: Part-time web developer with exposure to finance tech, working evenings and weekends.]

• Generate product naming ideas and validate them using semantic clustering and GPT-based variants. [Hiring manager: Brand strategist exploring AI tools with minimal in-house tech support; Solver: NLP-focused student in cognitive science program, hoping to apply research practically.]

• Build a simple simulation model to optimize patient throughput at a pop-up vaccination site. [Hiring manager: Emergency response planner needed quick, affordable analysis; Solver: Engineering alum with healthcare logistics background between consulting gigs.]

• Define data requirements and suggest future uses of member records for a professional association. [Hiring manager: Executive director looking to modernize data use; Solver: Information systems graduate with CRM integration experience, building a client portfolio.]

• Script and animate a short video that explains a new environmental policy initiative. [Hiring manager: Public policy organization wanted a creative explainer with domain understanding; Solver: Motion design student with Adobe After Effects portfolio interested in policy communication.]

• Compile and classify open datasets related to air quality in underserved neighborhoods. [Hiring manager: Community environmental activist wanted to make the data usable for grants and advocacy; Solver: Environmental science undergrad with GIS experience eager to contribute to impact-driven projects.]

• Build a lightweight GPT tool that helps internal teams draft first versions of grant applications. [Hiring manager: Nonprofit operations manager lacked tech support to test generative AI; Solver: AI-focused graduate student trained in prompt engineering and seeking practical GPT deployment work.]

• Conduct a discovery project for a digital museum archive—define structure, metadata needs, and search logic. [Hiring manager: Arts foundation curator with no in-house digital team; Solver: Information architecture student with library science background, interested in cultural tech projects.]

• Recommend tools and define workflows for automating a small biotech firm's experiment tracking. [Hiring manager: Lab operations manager struggling with manual spreadsheets; Solver: Bioinformatics alum now freelancing full-time after leaving industry role.]

• Help a first-time founder explore how to use their startup's small user dataset to inform design. [Hiring manager: Solo founder with limited technical literacy; Solver: Undergraduate CS student with strong product sense and early internship experience, eager to mentor founders.]

• Review and reorganize a Dropbox archive of design assets and project files for an architecture studio. [Hiring manager: Principal architect unable to hire IT support; Solver: Full-time product designer with background in asset management doing gigs to support career change into architecture tech.]

• Use GPT and open-source APIs to prototype a tool that generates customized lesson plans for ESL instructors. [Hiring manager: Adult education center director; Solver: Applied AI master's student with prior edtech work]

• Create an internal web app that helps small business owners track quarterly tax obligations. [Hiring manager: Local chamber of commerce advisor; Solver: Part-time web developer with tax domain exposure]

• Generate product naming ideas and validate them using semantic clustering and GPT-based variants. [Hiring manager: Brand strategist; Solver: NLP-focused student in cognitive science program]

• Build a simple simulation model to optimize patient throughput at a pop-up vaccination site. [Hiring manager: Emergency response planner; Solver: Engineering alum with background in healthcare logistics]

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• Build a lightweight GPT tool that helps internal teams draft first versions of grant applications. [Hiring manager: Nonprofit operations manager; Solver: AI-focused graduate student trained in prompt engineering]

• Conduct a discovery project for a digital museum archive—define structure, metadata needs, and search logic. [Hiring manager: Arts foundation curator; Solver: Information architecture student with library science background]

Appendix: Guiding Design Concepts Behind nugig

- **Problem-first, not job-first**
Redefine the unit of work around discrete, high-skill problems—not roles or tasks.

- **Value-creating problem-solving, not "school projects"**
Open up online markets for complex, creative, domain-specific problem-solving.

- **Short-term, part-time, talent-on-tap**
Scope each nugig to 20–40 hours over ≤45 days, with clear deliverables and price tiers.

- **Proposal over résumé**
Match based on tailored solution proposal, publicly-posted professional profiles, accumulated experience on platform.

- **Giving access to skills for the 99% of companies who struggle to hire them**
Deliver frontier skills (AI, data science, robotics, etc.) to organizations who might struggle to hire in the short run or hire this talent, generally.

- **AI-native platform architecture**
Embed AI across the workflow: problem scoping, talent matching, proposal review, sequencing.

- **Minimize resume spamming and gaming, minimize ghost jobs**
Use sequenced candidate invitations to replace open job boards and mass applications.

- **Trust through shared network**
Leverage the Northeastern community to build credibility and reduce friction.

- **Curated, not open-ended talent pools**
Activate a defined, high-skill user base—students, alumni, faculty—rather than anonymous freelancers.

- **Purpose + professional growth**
Support flexible gigs driven by learning, impact, and career experimentation.

- **Support for non-technical problem owners**
Help managers and founders scope projects, even without deep technical fluency.

- **Make scoping a skill**
Provide guided tools to help define meaningful, solvable, and value-aligned problems.

- **Productized formats as training wheels**
Let solvers list pre-scoped gig templates to ease employer onboarding.

- **Built as a living experiment**
Treat nugig as a research-backed, evolving model for the future of expert work online—today's job markets don't' work well. Let's continue innovating.

Appendix: Esteemed Contributors to Early Conceptualization, Experimentation, and Prototyping

- **Adam Ma**, Computer Science, Apprenta, FlexCar
- **Anand Hegde**, Program Manager, Computer Science, Amazon Web Services, Activision, Zynga, Intuit
- **Aneesh Arunjunai, Engineering & Computer Science & System Security**, digiAlert, KloudOne
- **Austen Keene, Program Manager, Computer Science**, Software Development, Amazon Web Services, Amazon Robotics
- **Conor Mackey, Artificial Intelligence,** Forest Foundation, Harvard University
- **Deveshi Thanawala**, **Software Engineering**, Veryable Marketplace
- **Ethan Mandel**, **Electrical & Computer Engineering**, RSA Geolab, Matrix New World Engineering
- **Hardik Mody Informations Systems and Computer Science**, Veryable Marketplace, Amazon Web Services
- **Jake Dwyer, Computer Science + Business Administration,** Elysium Arts
- **James Shah, Software Engineering**, DBreath Medical Devices
- **Lokhi Nalam, Data Analytics, Software Engineering,** Deloitte
- **Nikitha Tejpal, Computer Science**, Honeywell Corp
- **Pranav Kompally, Artificial Intelligence**, AG Mednet
- **Prathamesh Tajane, Computer Science**; **Amazon**, Philips Lighting, National Stock Exchange
- **Shruti Saravanan, Program Manager**, **Computer Science,** Zoho, Tactii, KloudOne
- **Sreerag Mandakathil, Program Manager**, **Software Engineering**; World History Association, **Amazon Robotics**
- **Steven Abbott, Research Assistant,** Computer Science, Goldston Oil Corporation, Morse Corp

- **Sudhanva Narayana**, **Research Assistant**, Software Engineering & Artificial Intelligence, Pixxel Machine Learning
- **Vivek Dalal**, **Software Development Engineer**, Embedded Systems; **Amazon Robotics,** Salesforce
- **Yogesh Arjun Kumaar,** Program Manager, Software Engineering & Artificial Intelligence, Harvard D^3 AI, CloudOne, Scientific Games, Amazon Robotics

* Please contact the author to report any omissions.