



Pesto Academy

Mission

Creating economic and personal growth through innovative and inclusive learning experiences.

Situation / Problem / Opportunity

The pandemic happened, the Great Resignation resulted, but even given recent Big Tech layoffs, the job market remains strong with unemployment at historic lows. With the pervasiveness of technology and increasing expectations of data and analytics, companies continue to suffer from a deficit of technical talent, especially software developers and cyber professionals. The resulting talent war continues with companies struggling as the lack of a resilient talent supply chain impedes productivity and growth.

Traditional education as a solution is lacking. Typical college curricula are too focused on theory and not committed to teaching more practical patterns, practices, and tools. Revisions to a college coursework typically take years, far too slow to track changes in high-tech industries. Skill gaps are prevalent with new graduates, and employer needs are often more technical with less focus on high-level engineering solutions. Most importantly, this career development option is too expensive and creates excess debt. [A recent study](#) defined a *wealth premium* metric and used this to show that younger white college graduates had only a bit more wealth than white high school graduates, and for younger black college graduates, there was almost no wealth premium at all. Younger adults get this, with the percentage who say that a college degree is very important falling to 41 percent from 74 percent just a decade ago.

Software Developers and Quality Assurance Analysts are among the hottest of the jobs listed in the recent Michigan's Hot Job Outlook Through 2030 report with projected annual openings of almost four thousand. This is a conservative estimate considering dynamics such as the State's investment in mobility, the impacts of remote work, and even population migration due to climate change. This report also lists a bachelor's degree as the required level of education – this is misleading. The 2023 Developer Survey from Stack Overflow does support this assertion concerning degrees, but many developers have non-related degrees, and when asked how they learned to code, only 50% selected university or college. There is no age breakdown available but the assumption that younger professionals had more diverse instructional pathways is likely.

This challenge requires a new level of employer investment in workforce development and the Pesto Academy is creating the solution – an apprentice model where lean and agile processes are applied that minimize the time-to-market for new talent and maximizes employer ROI. Education and training are purposeful with a narrow focus on current tools, patterns, and practices required for the job; the learning process emulates the team environment and culture; and learners transition to into billable professionals as soon as possible. A talent pipeline is created where employers make early investments in talent to pull prospects into junior positions.

Innovative employer-led systems can deliver these most in-demand professionals and create significant economic opportunity. These alternative work-based learning programs are a proven model of effective workforce development, beneficial to both employer and learner, and can respond to the changing requirements of high-tech industries.

“Battery and chip plants are great for SE Michigan but not for the rural north. Let's discuss building a pool of knowledge workers able to support IT remotely while enjoying Michigan's quality of life. The Petoskey area is the perfect launch given the rural broadband that is already deployed thanks to Great Lakes Energy. The Pesto Group and Pesto Academy have an innovative DOL Registered Apprenticeship that is entirely remote and targeting software developers initially. Big value, big ROI, and very little investment. No research center, no costly plant...just laptops, existing Internet, and a community of professionals ready to share.”

The PA LearnOps Solution

Just as DevOps is an agile process designed to manage the entire life cycle of an application, LearnOps provides a streamlined approach to talent development.

Traditional education and workforce development are based on a mass production model with individuals pushed through structured K-12, undergraduate, graduate, and career placement programs. These siloed experiences are designed to output a pool of talent that employers select and hire from. This highly structured, linear pathway suffers from the inefficiencies of any push system. The employer is the end-user, yet it is often the university that defines requirements; the flow of talent is impeded by the friction between educational silos; and this unresponsive “make to stock” approach does not serve today’s dynamic STEM careers.

Our LearnOps approach applies our understanding and capabilities in lean and agile processes to education and training. Our programming utilizes apprenticeships as a tried-and-true process for creating high-value learning experiences for both employers and individuals. The cost of core knowledge is affordable by leveraging free or almost free online content, and rich learning is layered on top using remote project-based and team-based experiences. Finally, a targeted deep dive into the competencies required by the employer is facilitated by the apprentice’s mentor. Our workflow solution defines custom learning, tracks progress, and simplifies reporting. All is incorporated into this earn-while-you-learn model where the value of STEM talent is recognized, and employers invest early in a cohesive design, production, and delivery of these professionals.

Our Target

Software Development Companies (Focus here first)

1. Software companies or service companies using Ruby on Rails as development framework.
 - a. In-state (Michigan)
 - b. Out-of-state
2. Software companies or service companies using other languages and frameworks.
 - a. In-state (Michigan)
 - b. Out-of-state
3. Cybersecurity, software, or service companies that require cybersecurity professionals.
(reaching here, but very similar problem/opportunity and the solution will scale. This is a similar scaling of tccodes to tccyber.)

Young Professionals and Career Changers

1. Career changers
2. Non-traditional student (DEI) including female and veterans.
3. Secondary education
 - a. High School Career Tech Ed (CTE)
 - b. High School Computer Science

Our Brand Experience

- Connected, Distributed
- Community focus
- Work-life balance
- Fun
- Agile, Lean
- Diverse, inclusive
- Clean, modern

Relationships

1. PA is a non-profit teaching and learning organization with offices located in the NorthCoast.Work co-working space.
2. PA is providing initial services to The Pesto Group by designing a DOL RAP and delivering the required related technical instruction (RTI).
3. PA provides low to no cost IT courses and certifications through a partnership with Cisco Networking Academy

Assets

1. URL <https://pesto.academy>
2. Website - #TODO
3. LinkedIn company page?
4. Internal landing page for RAP - [The Pesto Group | rap \(pesto-acad.github.io\)](#)
5. RAP App (airtable prototype)
6. Cisco NetAcad - [I'm Teaching | Networking Academy \(netacad.com\)](#)
 - a. NetAcad – no cost
 - b. Platinum ASC (\$400/yr)

State of Michigan Marketing video

Our People

Team makeup

1. Jesse – Dean
2. Keith – LearnOps Master
3. Nick – DevOps Master

BIOS

Jesse (from LinkedIn)

My focus as CEO of The Pesto Group is split into three primary parts: New business development, Research and Modeling, and ensuring the leadership team has the resources they need to accomplish their goals. Our company ethos are founded upon earning the right to lead, and I am no different in that regard. Leadership is harder work than Authority, but the results speak for themselves throughout our organization.

If a no nonsense approach to problems solving and product development appeals to you, don't hesitate to reach out!

Keith

Keith Kelly has spent his career at the intersection of education and technology, preparing students and professionals for continual success working in advanced technology. He currently serves as faculty member in Engineering and Engineering Technology at Northwestern Michigan College where he leads computer science, robotics, and makerspace initiatives. As Director of Workforce Development at NorthCoast.Work and LearnOps lead at Pesto Academy, he is scaling early successes in community-based talent development across northern Michigan and the Upper Peninsula.

Nick

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