



INDIANA DEPARTMENT OF
WORKFORCE
DEVELOPMENT

Title: Pivot – an Indiana artificial intelligence workforce engine

Category: State IT Recognition

State: Indiana

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Project Initiation Date: 2020

Project End Date: Ongoing

Executive Summary

You are unemployed, what's next? Do you head to the nearest online job search website, send in your resume to anything that sounds remotely close to what you want, and hope for the best? Unemployed Hoosiers now have access to an artificial intelligence tool that is customizable for them!

Pivot, an Indiana Workforce Engine, leverages the Indiana Statewide Longitudinal Data Systems (SLDS) to provide a powerful set of data that links together education and workforce outcomes, tailored to each specific job seeker.

Individuals can now automatically receive relevant, personalized job options without having to create or have a list of work experience. Thanks to the use of information available only to the State of Indiana, Pivot can compare and contrast similar individuals to suggest pathways to the user that will provide a higher wage and meet the individual's career needs and goals.

Idea

It's June 2020 and the COVID pandemic is greatly affecting the everyday life of Hoosiers. Businesses are shutting down; employees are in turn, out of work. The rise in unemployment is sudden and the Indiana Department of Workforce Development (DWD) begins looking for a way to address the concerning rise in unemployed workers.

Uplink, the automated self-service Unemployment Insurance system, gives job seekers access to enhanced services, where you can manage your own profile, apply for unemployment benefits and file for weekly benefits, and use help screens and navigation aids to assist you in using the system. However, the DWD team wanted to do more.

DWD had posted Hoosier Hot 50 Jobs for years, which would be created by looking at workforce trends and speaking with industry officials to determine which jobs would be needed on the horizon. However, that was an aggregate list, sometimes provided regionally, but often it was statewide. It was a very one-size-fits-all approach.

They jotted down the key problems for job seekers:

- Users are unsure of where to start;
- Users are confused of how to navigate systems and services; and
- Users are uncertain of their skills needed for new careers.

They then noted the key challenges of their current system and how they can enhance it.

- How might we provide clear, actionable next steps for job seekers?
- How might we leverage State data to improve the quality of recommendations?
- How might we democratize career coaching?

A prototype algorithm was created to simplify the process for job seekers; send them directly to the next step, allowing them to explore opportunities that are right for them, both where they are now or with a little more training or education to help advance their career.

Using the algorithm and test persona data, DWD applied for a QUEST grant from the United States Department of Labor (DOL) in July 2022. DOL awarded the grant, and after a procurement, the project kicked off in April 2023.

Implementation

Hoosiers who have filed for unemployment insurance (UI) are at both a delicate and unrestricted point in their career. While the State of Indiana has many programs through the DWD to help UI claimants upskill, reskill, and change jobs, it can be difficult to find the right starting point.

The Need: Move from an open-ended offer of options to a check list of options, specific to the job seeker.

Led by DWD's Chief of Staff, Josh Richardson, and Chief Information Officer, Chris Henderson, a coalition of subject matter experts and technologists was assembled.

DWD leveraged its strong partnerships with partner agencies, the Commission for Higher Education (CHE), the Department of Education (DOE), the Management Performance Hub (MPH), and the Office of Technology (IOT) and engaged the expertise of Resultant, an Indiana-based consulting and services provider, to implement the Indiana Workforce Engine, Pivot.

Pivot is powered by artificial intelligence, to enhance job seekers' experience exploring potential career paths. Based on past and present job market data, AI can project future demand in a particular sector. AI can compile job seekers' information — from education to work history — and align skillsets with relevant skilling programs to help people advance.



By November 2023, Pivot was launched. The system leverages the Indiana Statewide Longitudinal Data Systems (SLDS) to provide a powerful set of data that links together education and workforce outcomes from the state agencies mentioned above. At its core, Pivot is a recommender system with hybrid filtering trained on the SLDS data that is based on real Hoosiers with real outcomes.

Transforming a workforce engine into a more intelligent tool capable of suggesting a process to obtain a new job is a first. Never before have individuals been able to automatically receive relevant, personalized job options without having to create or have a list of work experience. Thanks to the use of information available only to the State of Indiana, Pivot can compare and contrast similar individuals to suggest pathways to the user that will provide a higher wage and meet the individual's career needs and

goals.

"We've added no additional steps to that process," commented Richardson. "We're simply using the information that they've already given to us to generate recommendations for them."

Pivot was designed to deliver its recommendations in a reusable and composable fashion, allowing DWD to add value and enrich the experiences of the systems and services already familiar to Hoosiers (Uplink) - instead of adding another standalone destination the user must find.

Pivot provides pay scale, suggests training options based on the user's background, and provides links to current job openings, giving the job seeker clear and actionable next steps without the need of additional data input.

The opt-in program offers a simple ranking process as it suggests job options. Users grade their interest in the job options with a green smiley face for yes, yellow neutral face for maybe, or red angry face for no. They can also provide additional feedback, like "too much training," to help Pivot curate future suggestions. This process tailors options to the job seeker that better fit what they're looking for in a career change.

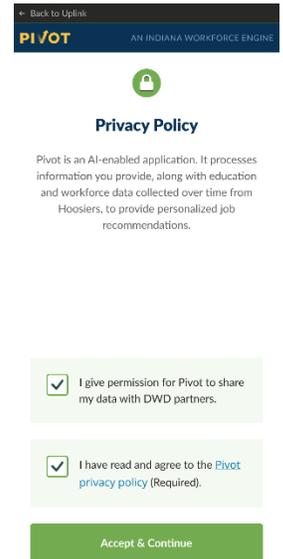
Integrated into Uplink, the main unemployment application through API, Pivot is built mobile first. More than 70% of unemployment applicants file their claims via a smartphone, so Pivot had to easily fit on that form factor.

Impact

Simplifying the process

Pivot, Indiana's Workforce Engine, offers a curated path for job seekers by using their past experiences and leveraging wage record data available when deciding what to do next in their career journey. Since Pivot is built into the state's unemployment insurance system, it is simple for users to dive right into it, rather than trying to encourage them to click a link a go to another site.

Since its launch in November 2023 through the first week of March 2024, DWD has seen more than 68,000 unemployment claims filed. Of those, 41,976 chose to use Pivot and the system received 31,383 feedback clicks.



NEW CLAIMS SINCE LAUNCH



68,197 initial claims between November 2023 through first week of March 2024

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Median Wage



\$23/hour

Training Duration



1.5 years

Training Plan Completion



84%

Job Demand



High

Job Openings



The estimated number of current openings for this job in your county

212

Sound interesting?

Please rate this job so we can help you take the right next step.



No thanks



Maybe



Yes!

"No thanks" Reset

Please tell us what you don't like about this job. Check all that apply.

- Uninterested in the industry
- Job is too similar to my previous job
- Wages are too low
- Uninterested in the training

[Submit & Close](#)

"Maybe" Reset

Please tell us what you don't like about this job. Check all that apply.

- Need more info about the job
- Job is too similar to my previous job
- Wage may not meet my needs
- Need more info on the training

[Submit & Close](#)

"Yes!" Reset

Great! We have additional resources ready to help you with the next steps in pursuing this job.

[Explore this job](#)

[Return to Jobs List](#)

Pivot has a feedback section so that the system can be better trained to provide career matches.

Pivot intuitively hands users off to Indiana Career Explorer, which is a free career and education planning tool that supports job seekers through all steps in mapping out their goals, to pick right up at jobs they were looking for. Indiana Career Explorer received 28,658 click throughs from Pivot users from Nov. 2023 through the first week of March 2024.

Level	Annual Salary	Hourly Salary
Average	\$77,560	\$37.29
Entry Level	\$44,480	\$21.39
Mid Level	\$72,180	\$34.70
Expert Level	\$122,090	\$58.70

Future

Pivot's current function is to help a user choose an occupation, but Richardson said its next phase is expected to launch this fall: using AI to offer users recommendations on training providers and making the career advancement process even more seamless

Longer-term still, the state would like to make Pivot available outside the unemployment insurance system, to support people in other stages of job seeking. Moving forward, the average Hoosier looking for their next job will have educated options available rather than options based on a vocabulary scan of a resume. Pathways for high school students wanting a better understanding of schooling or skill options will become clearer.

Pivot's ability to develop a personalized pathway will organize state workforce programs into an easy-to-understand checklist. Hoosiers will better know how they can count on Indiana to serve them and where to start when reaching out for help. Pivot revolutionizes how state programs work.