Alex Bair

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👤 PROFILE

I'm a full stack software engineer with extensive experience in JavaScript, TypeScript, and Ruby. I leverage my engineering and project management backgrounds to deconstruct complex problems and drive them to resolution. When I'm not at the computer, I bake (usually tasty) cookies and lift (not usually heavy) weights.

💼 EXPERIENCE

Creator, Software Engineer, Willow ⧉   2024 – present

Willow (willow-cdc.github.io) ⧉ is an open-source framework for creating change data capture pipelines. It reflects database changes to a cache in near real-time.

- Reduced pipeline creation process from 9 steps to 4 steps.
- Designed and constructed a custom connector to transform events from Kafka and send to a cache (KafkaJS).
- Resolved Debezium configuration issues preventing multiple pipelines from connecting to the same database.
- Ensured Willow functions when provided a minimum privileged database user, avoiding the need to provide Willow with superuser privileges.
- Architected and implemented a RESTful API, facilitating pipeline creation and teardown (Express).
- Built pipeline management UI (React, Material UI).
- Authored comprehensive technical case study (willow-cdc.github.io/case-study ⧉).

Software Engineer, Self-employed   2022 – 2024

Developed freelance and open-source applications including:

- *Whirlpool* - Tool for collecting and debugging webhooks (DO Droplet, Nginx, Express, Socket.io).
- *Media Watchlist* - A media tracking web app (Ruby, Sinatra, PostgreSQL, HTML/CSS).

Project Management Specialist, Merck   2019 – 2022

- Led cross-functional teams on a $46MM capital project portfolio to increase vaccine supply capacity.

Photolithography Process Engineer, Texas Instruments   2017 – 2019

- Developed detection/interdiction systems using in-house technologies, reducing material holds by 30%.

🧠 SKILLS

Backend	**Frontend**	**Other**
Node.js, Ruby, Golang, PostgreSQL, MongoDB, RESTful APIs, Express, Sinatra, Minitest, Redis, KafkaJS	JavaScript (ES6+), TypeScript, HTML, CSS, React, Jest, Handlebars	Git/GitHub, Docker, Linux, Bash, Apache Kafka, Debezium, Nginx, Object Oriented Programming

🎓 EDUCATION

Launch School   2022 – 2024

Multi-year, mastery-based software engineering curriculum. Read more at launchschool.com/employers ⧉

Rose-Hulman Institute of Technology   2013 – 2017

B.S. Chemical Engineering, *summa cum laude*   GPA 3.98