Alex Bair

Chapel Hill, NC   alexbair143@gmail.com   alex-bair.com   alex-bair

👤 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. I love learning & using new technologies, applying deep technical knowledge to solve difficult problems, and working on a team to build amazing applications.

💼 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.
- Developed framework to simplify change data capture pipeline creation from 9 steps to 4 steps.
- Architected and implemented a RESTful API, facilitating pipeline creation and teardown (Node.js, Express).
- Designed and constructed a custom Kafka connector to transform events from Kafka and send them to a cache (Node.js, KafkaJS, Redis).
- Built user-friendly UI to streamline pipeline management (React, Material UI).
- Resolved Debezium configuration issues preventing multiple pipelines from connecting to the same database (PostgreSQL, Debezium).
- Ensured Willow functions when provided a minimum privileged database user, avoiding the need to provide Willow with superuser privileges.
- Collaborated remotely with an international team of four engineers using daily standups and pair programming (Git, GitHub, Slack).
- 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, MongoDB, 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.
- Fostered a collaborative, friendly environment among team members while achieving business objectives.

Photolithography Process Engineer, Texas Instruments   2017 – 2019
- Developed detection/interdiction systems using in-house technologies, reducing material holds by 30%.

🧠 SKILLS

Backend
Node.js, Ruby, Golang, PostgreSQL, MongoDB, RESTful APIs, Express, Sinatra, Minitest

Frontend
JavaScript (ES6+), TypeScript, HTML, CSS, React, Jest, Handlebars

Other
Git/GitHub, Docker, Linux, Bash, Apache Kafka, Debezium, Nginx, Object Oriented Programming

🎓 EDUCATION

Launch School
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