Charles Bethin

Results-driven, React-focused Full Stack Engineer

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EDUCATION

Stevens Institute of Technology
M.E. Computer Engineering, 2020.
B.E. Computer Engineering, 2019

SKILLS

Languages

JavaScript	TypeScript	Python
HTML / CSS	SQL	Swift
Go	Java	Kotlin

Libraries & Frameworks

React, React Native, Vue.js, Node.js, Flask, Express.js, Keras, TensorFlow, PyTorch, SwiftUI, Swagger, Pandas, NumPy

Tools

Git, PostgreSQL, MongoDB, CircleCI, FullStory, AWS, GCloud, IBM Cloud, Docker, Kubernetes, Snowflake, Apache Spark, Hive, Tableau, Sketch, Figma

Concepts

Enterprise Design Thinking
New Product Development
Big Data & Machine Learning
Agile & Running Scrums
UI/UX Design
RESTful API Design
Internet & Networks Design
CDN Architecture

Hackathons

- 3rd Place: Designed in-person validation to protect academics (JPMorgan Code 4 Good, 2019)
- 1st Place: Optimized video traffic with a business model and network design (Launchpad Hackathon, 2016)

TECHNICAL EXPERIENCE

Empower Finance.

Sr Software Engineer, Full Stack - Growth   *Apr 2024 - Present*

- Achieved a 60% uplift in registration Lighthouse scores and a 10% increase in user registration rates by spearheading the design and implementation of a cutting-edge greenfield React app.
- Reinvigorated internal frontend analytics by consolidating abstractions into a single source of truth, reducing tracking inaccuracies from 20% to less than 1%.

Petal.

Sr Software Engineer, Full Stack - Growth   *Oct 2023 - Apr 2024*

- Enhanced development efficiency by leading a monorepo migration away from Redux and Redux-Saga, reducing lead time and PR sizes.
- Spearheaded a Frontend Guild to promote collaboration and knowledge-sharing on frontend development and infrastructure.

Software Engineer II, Full Stack - Growth   *Feb 2021 - Oct 2023*

- Delivered user-facing React/Expo features for 100k+ applicants while managing backend development in Python.
- Elevated test coverage from 3% to over 80% by implementing rigorous testing standards.
- Achieved $30k+ annual savings by standardizing React best practices and addressing improper hook usage.
- Enabled a 40% reduction in CI/CD times by modernizing critical tooling and supporting the adoption of modern workspaces architecture.

IBM. *Full Stack Software Engineer*   *Jun 2019 - Feb 2021*

- Partnered with third-party clients to identify pain points and delivered innovative MVP solutions, rapidly mastering new technologies as needed.
- Led the development and deployment of a React Native COVID-19 data app, supporting over 10,000 users.
- Designed and implemented data visualizations that improved data processing through an optimized MapReduce model.

Stevens Institute of Technology. *Sponsored Researcher*   *Jan 2017 - May 2019*

- Developed advanced AI and network solutions, including an AI-based app for monitoring mental health symptoms using GCloud and PyTorch, and a WebRTC-based React app enabling global video communication.
- Engineered high-performance network tools, such as a real-time iOS network visualization app leveraging C++ for live packet inspection, and an intelligent CDN packet-routing architecture built with Go, AWS, and React for protocol tracking and routing optimization.