JULIAN FORTUNE

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EXPERIENCE

Amplica Labs

Software Engineer (Authentication Team) Dec 2023 – Present

Transferred to a back-end team working on user authentication for a social media platform (Frequency) based on an open source protocol.

- Added password authentication support to DB layer with salting and hashing.
- Implemented phone number blocking based on arbitrary prefixes via a Trie.
- Built out a separate service for sending SMS messages with fraud-prevention logic.
- **Stack**: Kotlin, Spring, Redis, & Postgres

Software Engineer (Full-stack) August 2023 – Dec 2023

Hired to work across the stack and bring functional programming experience to a customer loyalty product for a French soccer league.

- Developed React components using Tailwind CSS, implemented endpoints, added front-end features, and wrote Postgres migrations.
- Mentored peers and championed usage of algebraic data types and generic typing.
- Transformed requirements into concrete technical specifications and tickets (e.g., auction system), and collaborated with the design and product teams.
- **Stack**: Typescript, React, Storybook, NextJS, and tRPC.

Disney Streaming · Software Engineer June 2022–August 2023

Recruited to contribute to a set of internal tools for AWS Kinesis, including schema registry, code generation, and producer and consumer SDKs.

- Added Python support to the code generation plugin, which outputs a custom library with classes corresponding each event defined in a given schema registry.
- Analyzed and optimized AWS usage, resulting in annual savings over $1M.
- Added features to SDK's, 'higher-level' services (e.g., snapshotter), and SBT plugins.
- Created dashboards that enabled faster resolutions to production incidents.

Agot AI

Team Lead Jan 2022 – June 2022

Promoted to lead the team responsible for processing videos and creating training labels.

- Planned sprints, conducted interviews, and tracked the team's progress.
- Doubled the rate of training data produced through process improvements.

Software Engineer June 2021 – Jan 2022

Hired to develop integrations and algorithms for a computer vision feedback system.

- Implemented microservices in Python communicating via RabbitMQ.
- Wrote Python libraries for standardizing consuming and producing RabbitMQ events
- Started a Python lecture series to promote best practices.

Skyworks Solutions · Software Engineer (Intern) Jan 2021 – June 2021

Brought on to assist the audio deep learning team by performing machine learning experiments, administering cloud resources (e.g., MongoDB and TPU instances), and writing tests.

- Created a Python library for defining weighted finite-state transducers and applying operations (e.g., composition) based on technical papers.

Lucid Software · Software Engineer (Intern) June 2020 – Sep 2020

Developed new front-end components and refactored endpoints to support front-end changes.

- **Stack**: Angular and Typescript frontend, Scala backend.

CBT Nuggets · Software Engineer (Intern) June 2018 – June 2019

Worked on the mobile apps team (part-time during college) developing for iOS and tvOS.

ABOUT

Software engineer with 4 years of professional experience, expertise in leveraging functional techniques and type systems to prevent bugs, and a track record of success in environments ranging from early startups to massive enterprises.

EDUCATION

Oregon State University

B.S., Computer Science (4.0 GPA)
2017–2021

Relevant courses: Programming Language Fundamentals (Haskell) & Deep Learning.

PROJECTS

Functional-C — Statically-typed, interpreted language written in Haskell.

PaperECG — An application that digitizes ECGs built with PyQt.

PUBLICATIONS

Real-Time Speech Workload Estimation for Intelligent Human-Machine Systems
Human Factors and Ergonomics Society Annual Meeting, 2020.

Digitizing ECG image: A new method and open-source software code
Computer Methods and Programs in Biomedicine, June 2022.

SKILLS

Languages: Python, Typescript, Kotlin, Scala (with `cats`), Swift, & Haskell.

Cloud: Object storage, Postgres, MongoDB, Redis, instances, & message queues.

Tools: Docker, Terraform, Gradle, & Make.