

## Rory Fahy - Software Engineer

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Experienced Elixir developer with a proven track record of delivering scalable and efficient software

### TECHNICAL SKILLS

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**Proficient:** Elixir, Phoenix, Ecto, Java, Python, Javascript, Linux, Docker, PostgreSQL, Git, Vim

**Familiar:** OTP, Absinthe, LiveBook, Go, Github Actions, C, MQTT, React

**Interested in Learning:** LiveView, Tailwind

### EXPERIENCE

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**Driver Technologies Inc**, New Haven, CT

**September 2022 - Present**

*Software Engineer, Contractor*

- Onboarded quickly into a fast-paced startup environment, producing my first feature within 2 weeks.
- Heavy focus on unit testing (ExUnit) and security best practices.
- Supported multiple internal clients (Web/iOS/Android) via REST and GraphQL
- Managed critical production operations, ensuring seamless business operations during high-stress periods.

Project: Gateway API

- Created a data ingestion and analysis API that enables partners to add drive data (video, telematics, labeled-events) to our backend system for storage and analysis. This project opened a new line of business and helped to acquire 2 new business customers.(Phoenix, Ecto, ExAws S3)
- Ensured code-documentation alignment by generating an OpenAPI document upon every deploy (OpenApiSpex), Unit testing against that document to verify correctness (ExUnit) and uploading it to the documentation website with each production deploy. (driver-gateway.readme.io)

Project: Internal Reporting Metrics

- Overhauled an internal reporting tool that calculated operating metrics that provide key insights into the performance of the application ecosystem. The updates have allowed us to spot several sneaky bugs that it was previously incapable of detecting. (Oban, Elixir, PostgreSQL)

Project: Plant Trees

- Rolled out a feature enabling users to offset their carbon footprint by planting a tree for every 1000 miles driven helping to offset their carbon footprint.

**Lockheed Martin**, Stratford, CT

**January 2020 - January 2022**

*Software Engineer, Team Lead, June 2021 - January 2022*

*Software Engineer Associate, June 2020 - June 2021*

*Software Engineer Apprentice, January 2020 - June 2020*

Project: Automate Torque Wrench Data Orchestration

Architected, developed, and productionalized an end-to-end system for automated torque wrench control and data tracking that spanned multiple business areas. This system achieved ~\$5 million in annual savings and removed human error. (Java)

- Corrected a broken application that was impeding teams progress by volunteering to learn a new programming language (Go) and rapidly prototyping a solution in an expedited time frame. (2 weeks)
- Created a highly performant, multithreaded, socket level driver to communicate with wrench controller hardware, enabling the use of 100+ simultaneously operated torque wrenches per location. (Java, TCP)
- Developed a data pipeline that automated compliance data capture for reporting to government clients, improving data accuracy and reducing the risk of noncompliance.. (Java, Mosquitto, rabbitMQ)
- Ensured 100% data integrity and state persistence after outages by writing persistence logic that kept track of active jobs through flat files; these updates were passed through a queue on secondary compute to ensure no loss occurred while writing to disk. (Java, rabbitMQ)
- Created installation scripts that reduced the time and human error of deploying the system to each new location from 5+ manual hours to 15 minutes. (Python, Bash)
- Increased quality and velocity of app development/deployments by creating a CI/CD pipeline. (gitlabCI, Docker, Cloud Foundry)
- Secured traffic within the system by setting up mutual TLS between 6 different microservices.
- Reduced the number of bugs in production by creating a test harness that included a suite of tools for black box testing each microservice as well as integration and end-to-end testing. (Go)

### Project: Vehicle Registration Application

Enhanced security at 5 different Lockheed sites by rewriting and enhancing an outdated internal application for tracking vehicle parking. (Angular, Express, Postgresql, Cloud Foundry)

- Implemented user authentication and authorization.
- Migrated an application from a licensed Oracle Database to open-source PostgreSQL, achieving annual savings..
- Increased usability of UI by standardizing layout on every page and utilizing uniform fonts.
- Improved quality of lookups for users in violation by enforcing a standard format for all new data entries.

### Project: Supply Chain Database Migrations

- Migrated an application from a licensed Oracle Database to open-source Postgresql achieving annual savings. (C#, SQL)

### Leadership:

- Software Lead establishing new IoT team within the organization - Ran weekly developer meetings for process improvement and knowledge transfer. - helped decide what softwares, tools and practices the team would use. - Involved in the hiring process for several engineers - Provided guidance to 2 JR. SWE and 2 SWE interns.
- Mentored a Junior Software Engineer, guiding them to quickly get up to speed and make substantial contributions to the team's projects.
- Kept business informed about project progress by providing frequent presentations and demonstrations to business teams and multiple levels of management.

**Gro Intelligence**, New York, NY

**December 2019 - March 2020**

*Software Engineer Intern*

- Improved the quality and reliability of internal agricultural data through use of scripts to find various errors and redundancies in the data store. (Python, Postgres)
- Informed business decisions by applying NumPy and Pandas libraries to csv files in order to provide data driven answers and track progress.

**Alder Home Security**, Houston, TX / Cleveland, OH

**May 2017 - May 2018**

*Sales Representative*

- Determined successful lead conversion rate by projecting the number of contacted prospects needed to generate a sale.
- Continuously improved this conversion rate by empathizing with the client's needs, handling objections, maintaining an optimistic attitude and striving to have a positive impact.

### **PERSONAL PROJECTS**

**Witsees** - Aided in attainment of patent by partially prototyping video aggregation software and providing patent application review. (Python, React)

**Look This Way** - Ensured that I would never miss my favorite Netflix show by creating a CV tool that paused the show in progress whenever a face was not pointed at the screen. (Python, OpenCV)

**AmbientDJ** - Native desktop playlist generator based on song moods for use by table-top game narrators. (Python, Javascript, SQLite)

**Two-Sided Market: V1, V2, V3, V4** - Clone of the AirBnB website. (Flask, SQLAlchemy, HTML, CSS, Javascript)

**SimpleShell (sh)** - Developed a version of the Unix Shell. ( C )

**Sorting Algorithms** - Implemented: quick sort, merge sort, shell sort, radix sort, bitonic sort, heap sort, insertion sort and several other popular sorting algorithms. ( C )

### **EDUCATION / PROFESSIONAL DEVELOPMENT**

**University of Connecticut**, B.S. Structural Biology and Biophysics, Graduated: May 2017

**Holberton School**, Full-Stack Software Engineering Certificate Program, Graduated: June 2020

**Lockheed Martin Udacity Nanodegree**, AI Programming with Python, January 2022

**YCombinator Startup School**, August 2022