

Colin FitzGerald

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EDUCATION

University of California, Berkeley

August 2018 - May 2022

Bachelor of Arts in Economics, Minor in Data Science

Berkeley, CA

- Coursework: Computational Structures in Data Science, Principles of Data Science, Linear Algebra and Differential Equations, Probability and Mathematical Statistics in Data Science, Econometrics.
- Extracurricular: Track and Field Student-Athlete. Team Captain, leading group through PAC-12 Championships while dedicated to a strict 25+ hours/week training regime and balancing a full course load.

Technical Skills

Languages: Python, Typescript, R, SQL, HTML/CSS

Frameworks & Libraries: Next.js, React, Tanstack, FastAPI, SQLAlchemy, MUI

Software & Technologies: Kubernetes, Docker, Terraform, Git, GCP, AWS, S3, Mixpanel, Postman

Experience

Commure

Mountain View, CA

Software Engineer, EMR Team

January 2024 - Present

- Identified and resolved **company-wide** memory bug, saving \$100k+ in cloud spend per year in addition to speeding container cold starts from 4+ minutes to less than 10 seconds.
- Rebuilt native EMR Scribe backend from scratch, advocating for the switch from multi-threading to asynchronous I/O, reducing note processing time by over **300%**.
- Core engineer on EMR product from day 1, ensuring product quality while scaling to **\$10mm+** in ARR.

RoBhat Labs (Acquired by Commure)

Berkeley, CA

Full-Stack Engineer

June 2022 - January 2024

- Analyzed key product metrics with Mixpanel, leveraging reports to analyze customer use-trends and facilitate data-driven product improvement.
- Designed and developed content-ranking infrastructure, driving a **7%** increase in D1 retention and **5x** increase in aggregate notification engagement.
- Implemented a semantic search application for operators; Reduced manual labor by **25%** and prepped application for future scalability.
- Managed the performance of a team of **10** operators, ensuring content quality, accountability, and holding weekly check-in meetings to monitor and assess operator progress.

CoreVest Finance

Irvine, CA

Data Science Intern

May 2021 - August 2021

- Architected an **ETL** pipeline to extract inputs from 1k+ PDF loan applications through an **OCR** API and Python **Regex** scripts in a structured data format, simplifying loan application data processing.
- Proposed and led a team of interns in building a random forest model from the data pipeline.
- Using bootstrapping techniques, the accuracy of the initial model improved from the baseline 67% to **99.7%** deliverable for production as a copilot for loan underwriters, reducing manual labor by **20%**.
- Leveraged data analytics skills to build holistic customer personas for the marketing team, leading to a **3x** increase in the effectiveness of the ad campaign.

Projects

Audio Stream Processor Streaming Audio

- Built a full-stack application to process audio chunks in real-time using the OpenAI Whisper API
- Analyzed audio gain levels to quality control incoming byte chunks for silence
- Used an in-memory class to maintain all operations

AI Chatbot AI Chatbot

- Built an AI chat-bot for users to ask different questions
- Customized front-end text stream processing to display at a specified number of characters per second, resulting in an experience matching Anthropic
- Added support to chat with models from all major AI providers (OpenAI, Anthropic, Google)

Track and Field Hub Track and Field Hub

- Developed a platform tailored for track and field fans, indexing all potential athletics competitors for Paris 2024