

# Daniel D. Tripp

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## Work Experience

### Google

*Software Engineer Intern*

San Francisco, CA

*May 2022 - September 2022*

- Built a web-based **analytics platform** for extract, transform, load (ETL) pipelines using **Java, Spring Boot, Spring Data JPA, Hibernate**, Google Spanner, **Apache Kafka, ReactJS, Bootstrap, HTML**, and **CSS**.
- Implemented **RESTful API** to read/write data in Google Spanner relational database.
- Developed server-side application logic to aggregate data and compute relevant metrics.
- Designed and implemented a user interface that made data accessible in a meaningful and intuitive way.
- Used Spring Cloud Gateway as the API Gateway and Spring Cloud Eureka as the Service Registry.
- Implemented distributed tracing using Spring Cloud Sleuth and Zipkin.
- Used Grafana for data visualization to provide a graphical representation of the data related to ETL pipelines.
- Assumed ownership of the **software development lifecycle** from requirements to deployment.
- **Empowered 250+ engineers** and product managers to examine ETL pipelines and make real-time predictions about key metrics related to throughput, latency, saturation, and errors.

### Quantcast

*Software Engineer Intern*

San Francisco, CA

*July 2021 - October 2021*

- **Cloud Computing Resource Conservation**
  - \* Achieved a 6% reduction in operational costs associated with compute spend by improving resource (processing power, memory, file storage) management through cloud cost optimization.
  - \* Implemented and tested a resource auto-tuning algorithm to monitor recurring scheduled jobs for discrepancies between requested resources and consumed resources. This algorithm allocated fewer resources based on historical averages of resource use in previous instances of the job.
- **Machine Learning Infrastructure**
  - \* Reduced debugging time for machine learning model training by 30%.
  - \* Built an interactive, web-based analytics platform which allowed users to query and visualize metadata from the machine learning (ML) training process for thousands of ML models.
  - \* Eliminated the need for users to write Spark queries to view this metadata, and allowed modeling/data scientists to track down operational issues with the ML models much faster and more efficiently.
- **Tech Stack: Python, pandas, Java, Kubernetes, Docker, Terraform, AWS CloudFormation, Kafka**

## Skills

- **Backend Development:** Experience developing scalable backend systems using Java, Python, and C++ in a Linux/Unix environment.
- **Cloud Computing:** Proficient in developing and deploying cloud-based solutions using Google Cloud Platform and Amazon Web Services.
- **Data Processing:** Skilled in data processing and analytics using SQL, pandas, and NumPy.
- **Software Development Lifecycle:** Proficient in SDLC management, including requirements gathering, design, development, testing, and deployment.
- **Version Control:** Experienced with Git for version control and collaboration.
- **Web Development:** Skilled in building interactive, web-based applications using Django, Spring, React, JavaScript, HTML, and CSS.

## Projects

### Stock News

*App Retrieves Latest News. - [Link](#)*

*Python, REST API, pandas, Dash, Plotly, CSS, Bootstrap*

- Designed, coded, tested, and deployed a web application to display market data on over 500 US securities.

### Celebrity Face Matching: Machine Learning Application

*Face Recognition App with Deep Learning - [Link](#)*

*Python, TensorFlow, OpenCV, CSS, Dash, numpy*

- Application detects, captures, and analyzes user's face and returns an image of the most similar celebrity's face.

## Education

### California State University, Long Beach

Long Beach, CA

*Master's of Science: Computer Science*

*December 2023*

**Curriculum:** Analysis of Algorithms, Artificial Intelligence, Data Structures, Database Architecture, Design Patterns, Distributed Systems, Information Security, Machine Learning, Object Oriented Analysis & Design, Operating Systems, Programming Languages, Software Development Frameworks, Software Engineering, Software Testing & Verification.

### UCLA University of California, Los Angeles

Los Angeles, CA

*Bachelor's of Science: Biochemistry*