

# Ruifeng (Lawrence) Luo

Seeking Software Engineering Roles | (628) 235-7370 | San Francisco Bay Area, CA

[lawrence.luo@yahoo.com](mailto:lawrence.luo@yahoo.com) | [linkedin.com/in/ruifeng-luo/](https://www.linkedin.com/in/ruifeng-luo/) | [github.com/ruifengl1](https://github.com/ruifengl1) | [ruifengl1.github.io](https://ruifengl1.github.io)

## EDUCATION

**Master of Science in Data Science**, *University of San Francisco*

*Jul 2021 - Jul 2022*

Coursework: Data Structures and Algorithms, Distributed Computing and Systems, Database Systems, Advanced Machine Learning

**Master of Software Engineering**, *University of Melbourne*

*Jul 2017 - Nov 2019*

Coursework: Computer Systems, Object Oriented Programming, Software Requirements Analysis, Software Design and Architecture

## SKILLS

**Languages:** Java, Python, JavaScript/TypeScript, C/C++, SQL

**Frameworks:** Angular, Spring, Flask, Kafka, Redis, Spark, GenAI, LLM, LangChain, Instructor, Streamlit

**Developer Tools:** MySQL, PostgreSQL, MongoDB, Linux, Maven, Visual Studio, Git, Jira

**Infrastructure:** AWS, Docker, Kubernetes, DevOps, Distributed Systems, Microservice, APIs

## PUBLICATION

- Published [\*results\*](#) at AAPM 64<sup>th</sup> Annual Meeting & Exhibition, 2022 on the topic of Building a Bidirectional Encoder Representations From Transformers (BERT) Transfer Learning Framework for Glioma Overall Survival Prediction Using Unstructured Electronic Health Record Note.

## PROFESSIONAL EXPERIENCE

**Machine Learning Engineer**, *Capgemini, San Francisco, US*

*Oct 2023 - Present*

- Implemented automation pipelines to process text from over 400,000 documents into text embeddings before storing them in a database (Step Functions, Lambda, RDS).
- Developed data pipelines to quickly capture customer, product, and other relevant information from input documents (LLM, LangChain).
- Created a web-based product matching solution to identify the best matching products based on given requirements using hybrid search, helping the sales team achieve a 30% increase in product matching speed (Streamlit, AWS Lambda, API Gateway, Docker, PostgreSQL, Elasticsearch, Redis).
- Improved the performance of the product matching system and optimized result quality by leveraging LLM (Instructor, Pydantic, prompt engineering).

**Software Engineer Intern**, *Sensebrain, San Jose, US*

*May 2023 - Oct 2023*

- Built and supported an advanced image denoising web application utilizing neural networks, achieving 50+ user engagements on day one (Angular, TypeScript, Spring Boot, Java).
- Led the development of a pixel-level image comparison system in a web application, enabling precise detection of image differences and contributing to 30% increase in user satisfaction (Angular, TypeScript).
- Automated unit testing and deployment processes for web applications by establishing CI/CD pipelines, leading to 30% reduction in web development time (Gitlab, YAML, CI/CD, Docker).

**Machine Learning Research Intern**, *UCSF Medical Center, San Francisco, US*

*Nov 2021 - Jul 2022*

- Constructed and trained a BiLSTM model using document embeddings to predict the overall survival of brain cancer patients, achieving 15-30% improvement in predictive performance over clinical feature-driven baseline models (Pytorch, Doc2Vec, Python).
- Established pipelines to automate model hyperparameter tuning and visualize evaluation metrics, resulting in 20% improvement in model performance (Flask, Python).

**Data Engineer**, *Itoc (AWS Cloud Integrator and solution company), Sydney, AU*

*Apr 2020 - Jun 2021*

- Led the implementation and maintenance of high-performance, real-time financial transaction systems optimized for minimal latency, resulting in 10 ms reduction in processing time (Python, Java, Kafka, AWS Lambda, Docker, S3).

**Software Engineer Intern**, *National Australia Bank, Melbourne, AU*

*Jul 2019 - Apr 2020*

- Worked with developers to implement and support a monitoring system for operational servers, which improved service reliability by 10% (Python, Beam, EC2).

## PROJECTS

**Full-Stack Employee Management System** ([rebrand.ly/9v8l0fa](https://rebrand.ly/9v8l0fa))

- Led a team of 4 in developing a comprehensive web management system, enabling efficient management of employee data and activities, increasing onboarding efficiency by 30% (Java, Angular, Spring Boot, Spring MVC, Hibernate, MySQL, MongoDB, AWS (S3, RDS), RabbitMQ, Microservices).

**Java-based Distributed Messaging System** ([rebrand.ly/sg8h45t](https://rebrand.ly/sg8h45t))

- Led a team of developers to create a distributed messaging system, boosting communication speed by 45% through effective use of Java multi-threading and client-server architecture (Java, Maven, Socket, TCP, Concurrency Handling, OOD).