

Ruifeng (Lawrence) Luo

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

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Education

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

Jul 2021 - Jul 2022

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

Master of Software Engineering, *University of Melbourne*

Jul 2017 - Nov 2019

Coursework: Algorithms and Complexity, Java Programming, System Design, Software Requirements Analysis, Agile Methodologies

Skills

Programming: Python, Java, JavaScript/TypeScript, C/C++, R, Shell Scripting

Databases: MySQL, PostgreSQL, MongoDB, DynamoDB

Web Technologies: Angular, Spring Boot, Spring MVC, Hibernate, Flask, Microservices, RESTful APIs, HTML, CSS

Infrastructure/Cloud: AWS (S3, EC2, ECS, RDS, Lambda, EMR, Cloudformation, CodePipeline), CI/CD, DevOps

Platforms/Tools: Kafka, RabbitMQ, Spark, Beam, Docker, Linux, Maven, Visual Studio, Git

Professional Experience

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

Nov 2021 - Jul 2022

- Built a data pipeline to automatically pull data from databases using Python and PostgreSQL, automating 80% of manual work.
- Developed a system to pre-process 1000+ unstructured documents into a structured CSV format using Python (Pandas, Scikit-Learn), which was used as a dataset for training a time-series embedding machine learning model built using Python and deep learning library (Pytorch).
- Implemented and trained the BiLSTM model with document embeddings using Pytorch to predict the overall survival of brain cancer patients, which improved the predictive performance by 15-30% compared to the clinical features-driven baseline model.
- Wrote Python scripts for hyperparameter tuning, visualized metrics and compared model evaluations with a customized full-stack web application using HTML, CSS, Flask and Docker.

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

Apr 2020 - Jun 2021

- Built ETL pipelines to automate the process of data collection, data enrichment and transformation using Kafka Connect, KSQL and AWS Lambda/ECS, which provided valuable business intelligence to the managers and helped increase customer satisfaction by 40%.
- Created custom partitioners for Kafka producers in Java to send messages to particular partitions in Kafka Cluster, which lowered end-to-end latency by 10 ms.
- Designed and developed a data warehouse with STAR schema on AWS Aurora, which optimized SQL query performance by 25%.
- Set up CI/CD pipelines to automate software development, deployment, and testing using AWS CodePipeline and Cloudformation.

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

Jul 2019 - Apr 2020

- Developed a data processing system using Python and Beam to identify error events from application logging files, which speeded up diagnosing processes by 30% and improved application availability.
- Collaborated in a team of 5 software engineers, developing AWS cloud infrastructure solutions to improve application security, which reduced the number of discovered vulnerabilities by 80%.

Relevant Projects

Full-Stack Employee Management System (rebrand.ly/k3ltqde)

- Led a team of 4 to build a web-based management system that allowed administrators to manage employee information and activities while enabling employees to update their personal information, upload required documents, and monitor their onboarding status. By implementing this system, we were able to increase the efficiency of the employee onboarding process by 30%.
- Skills: Java, TypeScript, Angular, Spring MVC, Spring Boot, Hibernate, MySQL, MongoDB, AWS (S3, RDS), Microservices

Backend Online Shopping Application (rebrand.ly/88nhx8v)

- Designed and implemented a RESTful application that served the dual purpose of allowing customers to shop for various products online and enabling sellers to manage their product offerings and customers' activities. The application was developed using a monolithic layered architecture including a presentation layer, a business logic layer, and a data source layer.
- Skills: Java, Spring MVC, Spring Boot, Hibernate, MySQL, JWT, RESTful API, Postman

Honors & Awards

Merit Award for Computing and Information Systems, *University of Melbourne*

Mar 2019 - Nov 2019

- Received award for outstanding achievement in the Masters project which was top 2 of 20+ teams.

Engineering and IT Exchange Scholarship, *University of Melbourne*

Jun 2019 - Jul 2019

- Received award for outstanding performance in short-term coursework program which was top 5 of 30+ applicants.

Publications

- Published [*results*](#) at AAPM 64th 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.