

Tiantian Li

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Skills

Languages: Java, TypeScript, JavaScript, Python

Technologies/Frameworks: Spring Boot, React.js, RESTful APIs

DevOps: Git, CI/CD, AWS, Docker

Experience

Full Stack Developer, BeeQuant AI – Melbourne, VIC

Mar 2024 – July 2024

- Developed password update feature with React and TypeScript for account management UI, with Java Spring Boot and RESTful API integrating PostgreSQL for updating user credentials
- Implemented security best practices, including encrypted password storage using bcrypt, JWT-based authentication, and OAuth2 for third-party sign-in to ensure secure user access
- Achieved 90% test coverage by writing unit and integration tests for both frontend (Jest) and backend (JUnit)
- Developed BERT-based ML model using Python and PyTorch to predict cryptocurrency price trends by analysing the sentiment of tweets collected via Tweepy, achieving high precision and recall with an AUC of 0.85
- Optimised SEO and reduced page load times by 40% through server-side rendering with Next.js, improving user experience and search engine rankings
- Streamlined DevOps processes by automating CI/CD pipelines with GitHub Actions and Docker and migrating APIs to AWS Lambda, reducing deployment time by 50% and operational costs by 60%

Applied Data Scientist Intern, Dunnhumby – Shanghai, China

Jan 2022 – Apr 2022

- Expanded the capability of team's data query tool by adding support for nested queries, including subqueries and aggregations, resulting in a 20% increase in query request coverage and enabling deeper data insights
- Reorganised the query tool's logic by centralising parameter settings at the top, making it more user-friendly and reducing setup time, which led to faster query execution and fewer user errors
- Developed a machine learning-based advertising system that identified customers with declining loyalty, predicted their preferred products using logistic regression, and sent personalised promotional messages, achieving 12% conversion rate and 8% customer retention

Research Assistant, China University of Geosciences – Wuhan, China

June 2020 – Feb 2021

- Architected a data preprocessing pipeline by developing a pixel block mixing algorithm in Python with PyTorch, protecting image privacy during neural network training while maintaining high model accuracy
- Engineered a Python algorithm leveraging watermarking to generate adversarial examples that deceived TensorFlow DNNs on CIFAR-10 dataset with over 95% success, optimising processing time to 1.17s per image

Projects

Personal Profile Website

tiantian-li.me, github.com/oopshell/my-profile-website

- Developed and deployed a full-stack web application with React, TypeScript, and Java Spring Boot, implementing RESTful APIs to query work experience and project data from a MySQL database hosted on AWS RDS, leveraging AWS Lambda and S3 for cost-effective serverless hosting
- Optimised performance and security by integrating AWS CloudFront CDN, Load Balancer, AWS Certificate Manager, and Route 53, resulting in low-latency, secure HTTPS content delivery

Education

University of Melbourne – Master of Information Technology in Artificial Intelligence

July 2023

China University of Geosciences – Bachelor of Engineering in Information Security

June 2020