

# Ruoyu (Roy) Lu

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## Education

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**University of Melbourne** 07/2023 — 06/2026

*Master of Engineering (Software) | Melbourne, VIC*

**Southwest Jiaotong University** 09/2018 — 06/2022

*Bachelor of Engineering | Chengdu, China*

## Technical Skills

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- **Languages:** Python, Java, TypeScript/JavaScript, Kotlin, SQL
- **Cloud & Infrastructure:** AWS (Lambda, Cognito, S3, SQS, DynamoDB, CloudWatch), Azure Functions, Docker, Terraform, Kubernetes
- **Systems & Architecture:** REST APIs, event-driven architecture, distributed systems, OAuth 2.0, SAML SSO, Linux, Shell scripting, CI/CD
- **Databases & Search:** PostgreSQL, Redis, DynamoDB, Elasticsearch
- **Development:** React, Next.js, React Native, Flutter, Spring Boot, Express.js, Git, GitHub Actions

## Work Experience

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**Bybit** 11/2025 — Present

*Mobile Development Engineer Intern/ Remote*

- Improved P2P trading reliability by aligning client-side precision handling with backend settlement rules and adding retry-based payment verification for third-party integrations.
- Built merchant discovery and onboarding enhancements using country or region, trade history, and compliance rules to improve filtering and risk-aware workflows.

**1Receipt<sup>®</sup>** 07/2025 — Present

*Full-Stack Developer (Part-time) | Melbourne, VIC*

- Built Node.js/Express webhook ingestion services with idempotency controls to prevent duplicate receipt generation during retries.
- Maintained an AWS-based receipt processing pipeline, troubleshooting SQS queueing issues and improving OCR/PDF parsing across more receipt formats.
- Implemented Clover OAuth 2.0 authorization and POS integration across Kotlin and React Native components.

## Projects

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### Distributed Data Analytics Platform on Kubernetes

- Architected and deployed a distributed analytics platform on Melbourne Research Cloud using Kubernetes and Fission for event-driven ingestion and processing.
- Developed Python REST APIs and serverless pipelines for real-time and batch data workloads, and optimized Elasticsearch plus row-level security for performance and tenant isolation.

### Kineo Learning Pathway Modeling and Analytics Platform

- Worked with an enterprise client to turn L&D workflow requirements into a web platform for modeling learning pathways and integrating Totara LMS data sources.
- Designed Databricks and Azure Functions sync pipelines with event-driven processing, then implemented RBAC, SAML SSO, audit logging, Docker, Terraform, and GitHub Actions for delivery.

### Student Activity Management System

- Built a Java-based activity management system and Spring-inspired framework with IoC/DI, RESTful controllers, transaction management, and database concurrency controls using constraints, triggers, and optimistic locking.