

Pengfei (Brian) Zhang

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Graduating Dec 2026 · Subclass 485 eligible on completion — full Australian work rights, no sponsorship required

EDUCATION

The Australian National University

Master of Computing (Software Engineering) | GPA: 6.4/7.0

Canberra, ACT, Australia

Feb 2025–Dec 2026

The University of Queensland

Bachelor of Computer Science (Machine Learning) | GPA: 5.9/7.0

Brisbane, QLD, Australia

Jul 2020–Dec 2024

PROFESSIONAL EXPERIENCE

Shenhao Robotics International

Backend Software Engineer Intern — sole engineer on internal configuration tooling

Hangzhou, China

Dec 2025–Mar 2026

- Independently shipped a centrally hosted platform in 3 months as a customised fork of Foxglove Studio, delivering 3D visualisation and point-and-click editing for navigation topology maps, speed-limit zones, and virtual walls — replacing manual SSH-based per-robot configuration for robots deployed across rural China with no public internet access, eliminating the need to be physically present at a robot to inspect it.
- Developed the on-robot file and action service in Go: configuration APIs guarded by SHA-256 ETag optimistic locking against concurrent overwrites, with file allowlists and path-traversal protection; exposed 17 controlled operational actions orchestrating systemd services and ROS.
- Hardened against operator errors that would strand a robot in a location with no remote recovery: frontend map-consistency validation preventing cross-map edits, backend mapping-state mutual exclusion, per-action timeouts, and detailed failure reporting.
- Designed an offline Docker-based deployment pipeline auto-adapting to Ubuntu 18.04/20.04/Kylin and ROS Melodic/Noetic — cross-compiling the Go binary and installing systemd units for fleet-wide rollout on air-gapped inspection robots.
- Integrated AI coding agents (Claude Code, Codex) into the daily workflow to rapidly ramp up on a large codebase and improve development efficiency.

Tech Stack: Go, TypeScript, React, ROS, Docker, Linux/systemd, Claude Code, Codex

Practera

Student Consultant | Study Australia Industry Experience Program

Remote, Australia

Nov 2025–Dec 2025

- Led a 7-person team delivering market-entry analysis for a startup client — regional and competitor research, customer discovery, and SEO recommendations — presented as a 40-page strategy report.

The University of Queensland

Demonstrator | International Engagement Team

Brisbane, QLD, Australia

Apr 2024–Feb 2025

- Taught 23 tutorial sessions to 70+ students across 2 semesters, covering Python fundamentals and core data structures.
- Co-developed tutorial exercises and materials with the teaching team.

SKILLS

Languages: Go, Python, Java, TypeScript, JavaScript, SQL

Frameworks: Spring Boot, React, Flask, SQLAlchemy, JUnit, PyTorch, ROS/ROS 2

Cloud & DevOps: Git, CI/CD (GitHub Actions, GitLab CI), Docker, AWS (Lambda, API Gateway, DynamoDB, EC2, CloudFormation), Gradle, Linux/systemd

Databases: PostgreSQL, MySQL, DynamoDB, Redis

Practices: Agile/Scrum (sprint planning, backlog prioritisation, sprint demos), code review, test automation, AI-assisted development (Claude Code, Codex)

RELEVANT PROJECTS

DishPatch — Restaurant Service-Robot Platform | [Live Demo](#), [GitHub](#)

2026

- Led a 5-person team to build an open-source, AWS-based restaurant service-robot platform. Delivered ordering, automated meal dispatch, and a simulated robot fleet over 6 three-week sprints for an external client; translated operational needs into a prioritised backlog and demonstrated working increments each sprint.
- Built the dispatch backend (Spring Boot on EC2) bridging to the robot fleet via a rosbridge WebSocket client — subscribing to robot status topics and publishing navigation goals; implemented an in-memory robot registry with 20-second heartbeat expiry.
- Designed a serverless ordering API on AWS Lambda + API Gateway, persisting menus, orders, payments, tables, and users in DynamoDB.
- Automated deployment of every component through GitHub Actions + CloudFormation pipelines with keyless IAM OIDC authentication.

Tech Stack: Spring Boot, AWS (Lambda, API Gateway, DynamoDB, EC2, CloudFormation), Docker, ROS 2

Arty | Demo Video, GitHub

2024

- Led a 6-person team to ship a generative-AI art assistant, owning milestone breakdown and task allocation; achieved a 92% satisfaction rating from 61 surveyed users.
- Built the RESTful backend in Python (Flask + SQLAlchemy), hosted on university cloud infrastructure (UQ-Zone) with a dedicated GPU server.
- Developed a full-stack user account system enabling users to register, log in, and save generated images to a personalised gallery. Designed the relational MySQL schema to link user data with their saved artwork.
- Deployed and optimised Stable Diffusion with ControlNet on a custom GPU server, supporting txt2img, img2img, style transfer, and inpainting; integrated the BLIP model for image captioning.

Tech Stack: Flask, MySQL, SQLAlchemy, React, PyTorch, GitHub, Stable Diffusion, ControlNet

Java RPG Game

2025

- Worked with a 5-person team to develop an RPG game using Java 21; engineered the core game engine and logic handling systems.
- Optimised GitLab CI pipelines with Gradle build caching across build/test/docker/deploy stages.
- Authored a comprehensive JUnit 5 test suite; containerised the game with a multi-stage Docker build for reproducible local and CI environments; published images via GitLab's container registry for manual deploys on the main branch.

Tech Stack: Java, Gradle, GitLab, Docker

Open-Source Contribution — NewPipeExtractor | PR #1387

2025

- Fixed a SoundCloud channel-tab pagination bug (#12251) in NewPipeExtractor, a widely used open-source Java extraction library, by implementing visited-URL de-duplication and an empty-page cap; merged upstream after multiple rounds of maintainer code review.

EXTRACURRICULARS & LEADERSHIP

GDG ANU Committee

Canberra, ACT, Australia

Internal Vice President

Dec 2025–Jun 2026

- Coordinated a 17-person committee and contributed to key decisions on the society's annual direction and programming themes.
- Invited Google experts to deliver workshops and talks for the ANU community, and independently organised and hosted additional technical workshops and hackathons.

Technical Workshop Coordinator

Jul 2025–Dec 2025

- Co-organised and delivered Google ANZ's "Gen AI Academy" program series.
- Led hands-on technical workshops (50+ attendees) and co-hosted a hackathon with the ANU Data Science Community (108 attendees).

OTHER PROJECTS

- Mask R-CNN skin-lesion detector
- Flux.1-dev custom LoRA with a BLIP-captioned dataset
- DIY Chrome extensions

VOLUNTEER EXPERIENCE

Japanese Film Festival

Canberra, ACT

Volunteer

Dec 2025

- Supported festival-goers on the open day, welcoming guests and answering questions from the public.

Floriade 2025

Canberra, ACT

Volunteer

Sep–Oct 2025

- Assisted visitors at one of Canberra's largest public festivals, providing information and helping the event run smoothly in a busy outdoor setting.