

Po-Hao (James) Chang

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Education

Carnegie Mellon University

Master of Science in Software Engineering

Mountain View, CA
Aug 2022 - Dec 2023

- GPA: **4.0/4.0** (Overall)
- Courses: Foundations of Computer Systems, Cloud Computing, Software Design and Architecture, Intro. to Information Security, Foundations of Software Engineering

National Taiwan University

Bachelor of Science in Engineering Science and Ocean Engineering

Taipei, Taiwan
Sep 2018 - Jan 2022

- Area of concentration: EECS.
- GPA: **4.07/4.3** (Overall) - Top 5% in the class, 5 Presidential Awards.
- Courses: Introduction to Computer and Programming, Data Structures, Object-Oriented Programming, Discrete Mathematics, Probability and Statistics, Numerical Methods, Machine Learning, Parallel Computing, Database Systems, Web Programming.

Experience

Amazon Web Services (AWS)

Software Engineer Intern (DB)

New York, NY
May 2023 - Present

Working on query stuck monitor in Amazon Redshift distributed systems and cluster availability team.

- Implement runtime metric and event externalization to increase system availability.
- Integrated query stuck monitor with auto-ticket-generation system to reduce human on-call effort.
- Designed cross-account Virtual Private Cloud peering to enhance microservice security.

Carnegie Mellon University

Graduate Research Assistant

Mountain View, CA
Jan. 2023 - May 2023

Topic: Distributed System - RaftDB Realtime Visualization — Advisor: Leonardo da Silva Sousa

- Implemented scaling scripts to scale in/out RaftDB cluster triggered by HTTP requests.
- Refactored codebase to introduce a gRPC-based metrics collector to collect data from the RaftDB cluster.

Office of Academic Affairs, National Taiwan University

Full Stack Developer

Taipei, Taiwan/Remote
Jun 2022 - Aug 2022

Developed next-gen course planning tool (NTUCourse Neo) with the Computer Information Management Division.

- Migrated from MongoDB to PostgreSQL and redesigned database structure to achieve 50% query speed increase.
- Designed data cache to live parsing data to reduce loads of school websites.
- Led backend team to integrate services with existing school interfaces and migrate to self-hosted infrastructure.

Trend Micro

Cloud Development Engineer

Software Engineer Intern

Taipei, Taiwan
Sep 2021 - Mar 2022
Jul 2021 - Aug 2021

Developed and tested backend services in Trend Micro Vision One™ Device Vulnerability Scanning Service team.

- Completed 80% Behave (Python) test cases in two weeks and identified two bugs before major release.
- Designed and deployed CI/CD and test pipeline through Jenkins to reduce 50% of efforts on building verification.
- Implemented Terraform scripts to modify cloud infrastructure configurations.
- Promoted to contract-based software engineer after internship for outstanding performance.

Projects

NTUCourse Neo Team

National Taiwan University

Taipei, Taiwan/Remote
Nov 2021 - Jun 2022

A redesigned course planning web service for students in National Taiwan University.

- Assisted 5000+ students in course planning and gained 1500+ registered users.
- Designed frontend interface using React to provide intuitive user experience.
- Defined RESTful API specification and implemented JWT authorization with Auth0 service.
- Deployed serverless functions to parse real-time waitlist data from university course registration system.
- Won 2nd best team project of Fall 2021 Web Programming course and acquired by National Taiwan University.

Skills and Languages

Skills: Python, TypeScript, C++, React, Git, Docker, Microsoft Azure, MongoDB, PostgreSQL, Jenkins