Tat Chung Chan

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Education

University of California, Berkeley, BA in Computer Science and Applied Mathematics   Exp. Dec 2025
GPA: 3.53 | Courseworks: CS 61A: Structure and Interpretation of Computer Programs , CS 61B: Data Structures, CS 61C: Great Ideas in Computer Architecture, Data 8: The Foundations of Data Science, Data 100: Principles and Techniques of Data Science

Skills

Languages: Python, JavaScript, TypeScript, Java, C++ **Frameworks:** React, Flask, Angular, Next.js, Node.js, Django, Salesforce
Database: PostgreSQL, MySQL, SQLite, MongoDB **Tools:** AWS, Git, GitHub, Microsoft Office, Postman, GCP, NumPy, MatPlotlib

Experience

Software Engineer Intern, Ocean City Trading Co. – Remote   Jun 2024 – Sep 2024
- Reduced data input and search time by 95% by developing a full-stack application resulting in increased revenue by 60%.
- Utilized **React** and **Material UI** for frontend and **Flask** for backend, designed with the Model-View-Controller (MVC) pattern.
- Implemented a relational database system with **MySQL** and built **RESTful API** routes to efficiently process data.
- Deployed on **AWS** with **Linux** environment, setting up **IAM** for secure user authentication and order data backup.

Software Engineer Intern, Experia Tech Limited – Remote   Jun 2024 – Sep 2024
- Completed load testing projects with **JMeter** 3 weeks ahead of schedule, ensuring system reliability and performance.
- Captured and analyzed HTTP requests with **Postman** for the Architectural department's report generation system.
- Ensured system stability with automated testing, increasing overall testing efficiency with 100 concurrent testing users.
- Facilitated direct communication with clients to understand and meet business needs regarding deliverable features.

Software Engineer Intern, nCino – Wilmington, NC   May 2022 – Aug 2022
- Enhanced stability, and maintainability of a Fintech banking platform used by over 1,850 global financial institutions.
- Phased out outdated open source **Angular** libraries by building and injecting front-end components with **TypeScript**.
- Contributed to production codebase improvements using **Scrum** methodologies, ensuring timely and high-quality releases.

Projects

Order Management System (WMS) | **Next.js, TypeScript, shadcn/ui, React** Link (login username: test, password: 1234)
- Built a web-based order management system with TypeScript, Next.js 15, role-based auth, and protected routes for security.
- Designed RESTful CRUD for customer, product, and order management with Next.js API, featuring real-time validation.
- Developed a dynamic order workflow, automating tax, CRV, and total calculations, integrated with inventory management.
- Created responsive UI with shadcn/ui and Tailwind CSS, with reusable form components and searchable, filterable tables.
- Managed complex state across components using React hooks and context API, ensuring real-time data updates.
- Designed a multi-step order process with address validation, product search, enhancing user workflow efficiency.

SVD Image Compression Web Application | Next.js, FastAPI, AWS, Terraform, Docker Github |Demo
- Designed and deployed a full-stack web application that performs image compression using Singular Value Decomposition.
- Implemented containerized microservices architecture using **Docker**, with **Next.js** frontend and **Python FastAPI** backend.
- Established **CI/CD pipeline** using **Terraform** for infrastructure as code, managing **AWS** services including **ECR**, **ECS**, and **ALB**.
- Optimized application performance by implementing caching mechanisms and load balancer configurations.
- Designed RESTful API endpoints for image processing with **FastAPI**, handling file uploads and real-time compression.
- Integrated AWS services: **ECS Fargate** for container orchestration, **ECR** for container registry, and **ALB** for load balancing.

Teamcook (Hackathon - CalHacks 11.0) | React, MaterialUI, Figma, Flask, Python, SQLite, Toast API Link
- Led the system design in MVC pattern, ensuring a scalable architecture, deployed with **GitHub** Action, open for CI/CD.
- Developed real-time inventory management features, including restock and expiration alert, to optimize material usage.
- Designed an intuitive user interface with drop-and-drop recipe builder, integrated backend **REST API**, and **SQLite** database.
- Implemented team collaboration functionalities with user roles to improve kitchen workflow and communication.
- Primary contributor with the highest number of commits and successfully delivered the MVP within 48 hours in CalHacks

Youtube Clone | Next.js, Python, Google Cloud Platform Link
- Developed a YouTube clone with video upload, transcoding, and viewing functionalities using **Google Cloud Platform**.
- Implemented **Google Cloud Storage** for video hosting, **Cloud Pub/Sub** for event-driven processing, and **Firebase Auth**.
- Built a **Next.js** web client with **JavaScript** and **TypeScript** hosted on **Cloud Run**, with video metadata stored in **Firestore**.
- Used ffmpeg for video transcoding to optimize cloud storage and **Cloud Run** for scalable processing of video uploads.