



ETHAN CHEN

Richmond, BC

✉ yeethan59@gmail.com  [linkedin.com/in/chen-ethan-bb151b333/](https://www.linkedin.com/in/chen-ethan-bb151b333/)  <https://github.com/YEEthanCC>

Education

Simon Fraser University

Bachelor of Applied Science, Computer Science

May 2021 – Dec 2025

Burnaby, BC

Experience

Advantech

Jun 2024 – Jun 2025

Software Engineer Intern

Python, CI/CD, REST, Docker, Kubernetes, Typescript, Next.js

- Designed a model AI-powered smart house system by integrating the company's LLM app development platform with Webduino-Blocky (a JavaScript-based microcontroller programming platform) to demonstrate the potential of the company's product.
- Implemented a REST API that controls different home components with Express and deployed its container to Kubernetes, enabling the AI app's access to the services.
- Contributed to the testing of AI applications and their underlying LLMs developed using the company's GenAI application platform, which has been deployed across 12 factories by one of the world's leading IPC manufacturers.
- Took a lead role in the development of the LLM testing framework that streamlines the evaluation process of models on required benchmarks and inference metrics to provide engineers and commercial users with critical insights for selecting optimal models for their AI application.
- Developed a Next.js-based leaderboard webpage for LLMs' performance with automated test result updates integrated through a CI/CD pipeline to ensure end users had immediate access to the latest model evaluation data.
- Designed and developed an automated testing web app with Python's Streamlit and Evidently leveraged LLMs to validate application responses against expected answers and perform concurrent testing reducing testing time by 97%.
- Collaborated closely with QAs on the automated testing framework to define key functionalities, design intuitive UI components, and ensure usability for adoption across teams.

Projects

AI Procurement Assistant | *Flask, Playwright, Websocket, React, Langgraph, RAG, Redis, PostgreSQL*

May 2025

- Developed an AI chatbot that automated customer product inquiries and sales support with RAG and GenAI, significantly improving service availability and reducing sales team workload.
- Implemented AI workflows that retrieved information relevant to users' queries from the vector database or other external resources using the LangGraph framework, enabling the chatbot to respond with accurate and contextually relevant information.
- Established a WebSocket connection using the Flask framework for more straightforward integration with Python-based LangGraph, and allowing more efficient communication between the client and the server
- Implemented a web crawler that collected information on 2970 products from the company's website with Playwright to build the chatbot's knowledge base for RAG operation.
- Leveraged Redis for efficient chatbot session management and PostgreSQL for durable long-term chat history storage, optimizing performance and data persistence.
- Constructed chatbot's knowledge base using GraphRag for better performance at establishing connection between products and inquiries

Incident Report App | *MongoDB, Express, Angular, Node.js, JSON Web Token*

Jun 2024

- Built a CRUD application under the MEAN stack framework allowing users to report incidents on a map.
- Implemented Selenium to create an instance of Chrome in order to interact with the correct elements of the web page.
- Implemented backend logic using Express framework to manage routing and interaction with the database in an organized manner.
- Implemented mapping components using Leaflet and Nominatim APIs to support mapping and geocoding functionalities, enhancing the visual display of incident locations.
- Set up proper routing using Angular Router allowing smooth navigation between different web pages.
- Applied dependency injection on the handling of reports data between different components using Angular Service to make the code less coupled and more reusable.
- Implemented authorization and authentication by generating and verifying JSON Web Token in the backend, using Angular directive for conditional rendering, and applying AuthGuard for route protection in the frontend, ensuring public access to report data while restricting modification and report creation to authorized users.
- Designed an intuitive and visually consistent UI using Angular Material and Bootstrap, enhancing user experience.

Technical Skills

Languages:Linux, Python, C++, HTML/CSS, JavaScript, Typescript, SQL

Technologies/Frameworks:Next.js, Express, Flask, Pytorch, LangChain, , PostgreSQL