

EDUCATION

National University of Singapore

Bachelor of Computing in Computer Science, Second Major in Statistics

Aug. 2023 – May 2027 (Expected)

Current GPA: 4.55/5.0 (Ongoing)

TECHNICAL SKILLS

Languages: Python, C++/C, Java, Javascript/Typescript, SQL

Developer Tools: Git, Jupyter Notebook, Docker, AWS

Frameworks: React, NextJS

Libraries: Scikit-Learn, Pytorch, Tensorflow, Keras, Pandas

EXPERIENCES

Software Engineering Intern | Video Analytics

May 2024 – Aug 2024

Kabam Robotics

- Developed and deployed object-based tracking algorithms for a fleet of security robots, enhancing real-time object detection.
- Dockerized software and streamlined image processing pipelines using AWS cloud APIs, improving efficiency and scalability.
- Authored thorough documentation and optimised codebases, significantly reducing technical debt and facilitating future development.
- Conducted extensive testing and benchmarking of computer vision models including YOLO. Performed comprehensive data cleaning, preprocessing, and pipelining of large in-house datasets to ensure readiness for production deployment.

Member – Vice-President

August 2023 – Present

NUS/RC4 AI (Residential College 4 | National University of Singapore)

- Expanded expertise in machine learning and artificial intelligence through active membership in RC4AI, a student union group partnered with AISG to deliver quality AI education.
- Led initiatives and facilitated workshops, enhancing members' understanding and application of AI technologies.

PERSONAL PROJECTS

Droptiver | C++

May 2024 - Present

- Creating an intuitive and simple library of C++ header files to perform a diverse range of computations, from machine learning to quantitative trading simulations, leveraging mutexes and guards for enhanced concurrency control.
- Engineered for lightweight, plug-and-play integration into C++ programs, facilitating seamless processing of data stored in .csv files.
- Implemented features include the ability to save and load pre-trained models, achieving approximately 95% neural network accuracy, and a simulated internal broker API using historical stock data from YahooFinance.
- A personal project, continuously developed and improved out of a deep interest and commitment to mastering C++.

MedExtension | Javascript, OpenAI

December 2023

- Developed a Chrome extension utilizing OpenAI's GPT-3.5 Turbo model to generate concise summaries for highlighted text in online medical documents.
- Created and submitted a complementary CRUD forum website using Typescript, NextJS, and MongoDB.
- Designed and implemented the project for Health Hack 2024 as the sole programmer on the team, learning to effectively communicate with non-programmers to develop features and products that met their needs.

ArknightsParticles | Typescript, ThreeJS, GLSL

December 2023

- Developed a particle effect simulation using Typescript and ThreeJS by reverse-engineering elements from a game website.
- Refactored and optimized outdated GLSL shaders and ThreeJS code to leverage the latest functionalities for improved performance.
- Migrated the project from an outdated React framework to NextJS, ensuring a smoother deployment on Vercel.

Digits Predictor Webapp | Tensorflow, HTML, CSS, Javascript

December 2023

- Trained a TensorFlow convolutional neural network, achieving 97% accuracy in predicting digits from handwritten images.
- Integrated TensorFlowJS to import and utilise the trained model in JSON format, enabling real-time predictions within the webapp.
- Designed and implemented an interactive canvas component to capture handwritten user input, converting it into data arrays for precise model predictions.
- Visualized model confidence using ChartJS, providing users with intuitive and immediate feedback on prediction accuracy.

Portfolio Website | Typescript, React, NextJS, ThreeJS

December 2023 – Present

- Acquired proficiency in web development tools including Typescript, Tailwind, NextJS, and ThreeJS to build a dynamic and feature-rich portfolio website.
- Self-taught React and NextJS frameworks, incorporating ThreeJS to integrate 3D elements and enhance user experience.