

# RYAN CHUA

Willing to learn and work hard, looking for 2025 Summer Internship from 26 May to 22 Aug  
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## EDUCATION

**National University of Singapore**  
**Bachelor of Engineering**

**Aug 2022 - Present**

- Computer Engineering
- GPA: 4.59/5.0
- Expected Date of Graduation: May 2026
- Deans' List AY24/25 Semester 1

## WORK EXPERIENCE

**Machine Learning Engineer Intern | DSO National Laboratories, Singapore**

**Jan 2025 – Present**

## PROJECTS

**Finance Application | NextJS, React, TypeScript, TailwindCSS, Honojs**

**Jul 2024 – Aug 2024**

- Engineered and deployed a finance management platform using NextJS, allowing users to track and manage financial data.
- Incorporated dynamic charts and intuitive user interface, significantly improving user experience for account and transaction management.
- Strengthened application security with Honojs and enforced robust type safety using TypeScript.

**AI Platform | NextJS, React, TypeScript, TailwindCSS, Prisma**

**Jun 2024 – Jul 2024**

- Built and deployed a comprehensive AI platform utilising NextJS, enabling users to engage in AI-driven conversations and generate images, videos, and music.
- Enhanced user experience by integrating authentication and payment processing with Clerk and Stripe, ensuring secure and seamless transactions.
- Elevated platform's aesthetics and user interface through the implementation of TailwindCSS and shadcn components, delivering a visually appealing and intuitive user experience.

**Sign Language Detection | Python, TensorFlow, MediaPipe**

**Jun 2024**

- Implemented a deep learning model leveraging Long Short-Term Memory (LSTM) networks to achieve accurate real-time sign language detection.
- Incorporated the model into a live video feed to facilitate real-time sign language recognition.
- Optimised training process and detection speed using MediaPipe, significantly enhancing performance and efficiency.

**Stock Trading Bot | Python, Pytorch, Transformers**

**Apr 2024**

- Developed an automated trading bot in Python leveraging FinBERT, a pre-trained NLP model, for financial sentiment analysis to drive trading decisions.
- Integrated Alpaca's API for executing trades and utilized Yahoo Finance to access historical data essential for strategy backtesting.
- Employed Pytorch and Transformers libraries to load and operate the FinBERT model.

**RTOS Remote Controlled Robot | C, CMSIS-RTOS2**

**Feb 2024 - Apr 2024**

- Led a team of 4 to build a remote-controlled robot, utilising FRDM-KL25Z and RTOS, enhancing real-time command processing and response capabilities.
- Spearheaded software development phase, employing C to integrate RTOS constructs to handle tasks and commands transmitted via ESP32.
- Collaborated closely with teammates to troubleshoot and resolve hardware and software issues, improving system performance and reliability.

## TECHNICAL SKILLS

- Languages: (Experienced) Python | Java | C++ | C# | C | TypeScript | JavaScript (Exposure) Verilog
- Tools: (Experienced) Git (Exposure) NextJS | React | TailwindCSS | PyTorch | TensorFlow | Django | .Net | Flask | MySQL | SQL | HTML | CSS
- Others: Experienced in ATMEGA328P, ARM Cortex M0+, Raspberry Pi
- Certificates: Meta Back-End Developer, Machine Learning, CS50AI