

Raymond Chi

raymondchi56@gmail.com | [LinkedIn](#) | 646-628-4417 | [GitHub](#)

Education

The Cooper Union for the Advancement of Science and Art

Sept 2021 – May 2025

Bachelor of Engineering in Electrical Engineering; Minor in Computer Science.

Relevant Coursework: Hardware Design, Computer Architecture, App Development, Digital Signal Processing, Electronics, Data Structure and Algorithms, Communication Theory, Communication Networks, Software Engineering, Natural Language Processing

Skills

Languages: Python, C, C++, MATLAB, Verilog, HTML, PostgreSQL, Shell Script, VHDL, Javascript, MySQL, Java, Typescript

Technologies: Docker, Jenkins, React-Native, React, Spring Boot, Azure, Git, Flask, Kubernetes, Microservices, RestAPI, Django

Experience

Software Engineer Intern, Global Key Solutions New York, NY

June 2024 – Present

- Developed a LangChain-powered chatbot using RAG and SQL/PGQ, automating data retrieval and enhancing reliability.
- Designed MySQL tables and APIs, integrating automated pipelines for production deployment.
- Automated OCR text extraction from PDFs and streamlined data processing workflows.
- Built a periodic web scraper with BeautifulSoup and Selenium, updating 3,000 entries in the production database.
- Contributed to Agile weekly sprints with Jira, ensuring continuous delivery and team collaboration.

Instructor, BlueStamp Engineering New York, NY

May 2023 – June 2023

- Led students in IoT and embedded systems projects using Arduino and Raspberry Pi, driving hands-on expertise.
- Guided autonomous robotics projects, focusing on OpenCV-based object detection.
- Directed Flask-controlled robotics projects, emphasizing the integration of web interfaces in IoT solutions.
- Mentored students on sensors, microcontrollers, and communication protocols, equipped IoT and embedded systems skills.

Software Engineer Intern, Ambedded Technology Co., Ltd. Taipei, Taiwan

Jul 2023 – Sep 2023

- Conducted FIO test on Jenkins, to find optimal throughput of cores-to-driver ratio for Ceph storage ARM-based cluster.
- Enhanced FIO script for multiple test runs; Developed Linux network latency tests for cluster assessment.
- Improved Ceph storage read/write latency by 10% through tuning Linux network's sysctl parameters.
- Analyzed latency and runtime data to fine-tune system parameters, optimizing performance and creating visual reports.
- Explored DPDK, an open-source solution, to elevate network latency performance.

IoT Engineering Intern, Loisiada Inc. | [Link](#) New York, NY

Dec 2021 - May 2022

- Deployed over 40 Arduino and Raspberry Pi remote sensing units to monitor urban microclimates.
- Implemented Raspberry Pi Edge Gateways for real-time data aggregation and processing.
- Developed a Dockerized PostgreSQL database for efficient sensor data storage and visualization.
- Engineered a Linux-based mini-PC hub for reliable data collection and seamless system integration.

Projects

Full stack iOS mobile application, Nexus | [Link](#)

- Developing a networking application using React Native, featuring advanced discovery filtering with API integration, seamless match making system, and real-time chat functionality utilizing WebSockets.

Full stack school newsletter website, The Pioneer | [Link](#)

- Spearheaded the redesign of The Cooper Union's newspaper website using Docker, Firebase, PostgreSQL, React, and Spring Boot enhancing user interaction with article submissions, comments, and editorial workflows.

NLP Project Developer, Language Detection and Sentiment Analysis | [Link](#)

- Developed and compared FNN and CNN models using TensorFlow and Keras for language detection, achieving up to 97.2% accuracy with TF-IDF embeddings, and implemented sentiment analysis using CardiffNLP's Twitter models.

MIPS 32-bit computer on FPGA

- **Developed** a MIPS 32-bit computer using SystemVerilog, combining gate-level logic and behavioral design, implemented on an FPGA with AMD Vivado Design Suite.

Additional Projects: Image display (VGA) on FPGA, Implementing CPU on FPGA, Text Categorization using Naïve Bayes, CKY parser, Active Mixer, Colpitts oscillator, Decision Theory Simulation, Wired tic tac toe.

Activities and Awards

VIP: Drones, The Cooper Union: Dynamics and Control Lab

Jan 2023 – May 2023

- **Programmed** drones with ROS and Python, utilizing the Vicon camera system for precise navigation and autonomous control in dynamic environments.

LVE: Crew Member, Cooper Union Motorsports club

Sept 2021 – June 2022

- Low voltage electronics group who handled sensors readings, display and sensor testing with Arduino.

ABB robotics certificate DKR – German Center for Robotic

Issued June 2023