

Gavin Onghai

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EDUCATION

Yale University

New Haven, CT

B.S. in Electrical Engineering and Computer Science, B.A. in Mathematics; GPA: 3.77

May 2028

- **Hahn Scholarship** - Recognized as one of Yale's top 6 STEM applicants (6 selected, 0.01% of 57,517)
- **YES Scholarship** - Recognized as one of Yale's top 100 STEM applicants (100 selected, 0.17% of 57,517)
- **Relevant Coursework:** Data Structures, Discrete Math, Linear Algebra, Systems Programming, Probability
- **Activities:** Treasurer – Yale IEEE | Full-Stack Dev – Yale Blockchain Club | Fellow - Yale Quantitative Finance Organization, Yale Diversified Investments | Recruitment Chairman - Sigma Chi | Events Coordinator - Asian-ish

EXPERIENCE

Incoming Visiting Researcher

Jun 2026 – Aug 2026

Hong Kong University of Science and Technology (HKUST)

Sai Kung District, Hong Kong

- Working with Professor Gary Chan on Artificial Intelligence of Things (AIoT) for traffic optimization.

Software Engineer | *Python, FastAPI, PostgreSQL, Docker, React TS*

Sept 2025 – Dec 2025

NIRA AI (withnira.com)

Remote

- Architected multi-source ETL pipelines for Google Calendar and Mail, ingesting millions of metadata points across 1,000+ user accounts to fuel NIRA's AI search model.
- Engineered a calendar recommendation service from scratch using FastAPI and n8n, successfully scaling the agentic AI advisor to serve 1,000+ daily active users.
- Developed a Mailgun webhook system to parse email metadata in real-time, using signals to drive AI inference and trigger monetization workflows.
- Served as one of 3 core engineers alongside MIT and Stanford founders, rapidly prototyping and deploying product-defining features for a South Park Commons-backed startup.

Hahn Scholar Researcher | *Python (NumPy, Pandas, scikit-learn)*

Apr 2025 – Dec 2025

Yale School of Engineering and Applied Science

West Haven, CT

- Developed lensless imaging platform on Raspberry Pi, reconstructing 2D scenes by implementing object-oriented ADMM solver in Python for high-dimensional inverse problems.
- Automated data acquisition through waveplate scripting via serial-port control; processed 50K+ RGB frames into NumPy and Pandas pipelines for batch reconstruction and analysis.
- Applied scikit-learn regression across 19 waveplate angles to compute Stokes parameters, achieving sub 5% reconstruction error in polarization estimation

Software Engineer | *Python, React*

Feb 2025 – Present

Yale Computer Society

New Haven, CT

- Developed and maintained features for Yale Menus, a full-stack dining mobile app serving 5,000+ monthly users.
- Contributed to the Python-based scraping and API wrapper backend, reducing meal data delivery delay by 20%.

Research Internships

June 2022 – Sept 2023

Simons Summer Research Program — Garcia Summer Research Program

Stony Brook, NY

- Studied Fe(II)-catalysts for the oxidation of cellulose; achieved +15% yield, validated via FTIR and titration.
- Engineered a 3D-printable, conductive, biodegradable filament; 8× conductivity increase via polymer blending.
- Measured tracer diffusion in nanocomposite blends using DSIMS; co-authored paper in ACS Macromolecules.

Vice President and Web Developer | *JavaScript*

Aug 2023 – Aug 2024

Mission Toothbrush 501(c)(3)

Greater Long Island, New York

- Led drives and managed operations for a nonprofit distributing \$70K+ in hygiene supplies for local communities.
- Developed and launched a public webapp using JavaScript to spread awareness, increasing outreach by 10%.

TECHNICAL SKILLS

Languages: Python, C, C++, JavaScript, SQL, HTML, CSS, Verilog, Typescript, Java

Frameworks: Node.js, React, TailwindCSS, FastAPI, Next.js,

Developer Tools: Windows, Linux, Xilinx Vivado, VS Code, Git, Bash/Shell, PostgreSQL, Docker, Vite, n8n

Libraries: NumPy, Pandas, Matplotlib, scikit-learn