Hou Wai Yip

929-319-0129 | houwaiyip06@gmail.com | houwaiyip.com | linkedin.com/in/hou-wai-yip

Education

Stony Brook University **Stony Brook, NY**

B.S. in Computer Science *May 2028*

- Courses: Object-Oriented Programming, Discrete Math, Data Structures, Algorithms, and Data Analysis

Experience

Software Engineer Intern **Jun. 2026 – Aug. 2026**

AT&T *Middletown, NJ*

- Reduced DNS diagnostic overhead by developing an automated anomaly detection system in Python to monitor and alert on **140+ Terabytes** of daily traffic
- Streamlined network troubleshooting time by **70%** by creating a custom Model Context Protocol (MCP) server to automate real-time telemetry analysis

Google Software Engineering Program **Oct. 2025 – Present**

Google *New York City, NY*

- Collaborated 1:1 with a Google Engineer in an intensive 10-week mentorship, analyzing 40+ algorithmic problems to implement industry-standard practices for code performance and scalability

Software Automation Intern **Jul. 2024 – Aug. 2024**

Precision Gear *New York City, NY*

- Reduced document sorting time by **60%** by developing an automated filing system in Python to efficiently manage and organize **1,750+ PDF files**
- Increased accessibility and structure of company records by integrating the system with existing tools, automating data entry, and streamlining retrieval workflows

Projects

Seawolf Course Finder | *Python, Flask, scikit-learn, PyTorch, BeautifulSoup4, JavaScript*

- Developed a full-stack AI recommendation engine using **TF-IDF** and **cosine similarity**, achieving 95%+ relevance for 4,000+ courses
- Engineered scalable web scraping infrastructure using BeautifulSoup and concurrent processing to extract structured data from university catalogs across 60+ departments

Bionic Reading | *HTML, CSS, JSON, JavaScript, Chrome Extension APIs, DOM Manipulation*

- **Won the SBU Grace Hopper Hackathon** for a Bionic Reading Chrome extension that enhances digital reading accessibility for individuals with dyslexia and ADHD
- Leveraged JavaScript, HTML, and CSS to implement Bionic Reading Mode, dynamically bolding word segments and accelerating reading speed by over **15%**
- Utilized **Chrome Extension APIs** and **DOM Manipulation** to create a seamless and responsive user experience

Awards and Competitions

AT&T National Hackathon Finalist & Patent Co-Inventor **Jun. 2026**

- Engineered a multi-agent AI workflow using Python and custom agent orchestration to synthesize location-specific sales insights for enterprise reps
- Designed an interactive React dashboard to consolidate multi-agent outputs into a unified interface, cutting insight retrieval time during live demo evaluations

Hackathon and Datathon Winner **Feb. 2025 – Apr. 2025**

Stony Brook University *Stony Brook, NY*

- Hackathon Winner - Stony Brook University Grace Hopper Hackathon
- Deans List - Stony Brook University (All Semesters)
- Datathon Winner (Financial Analysis Track) - Stony Brook University Datathon

Technical Skills

Languages: Python, Java, JavaScript, SQL, HTML, CSS, C, C++
Frameworks / Libraries: Node.js, Flask, Pandas, NumPy, Matplotlib, React, Tailwind CSS
Databases / Tools: PostgreSQL, Firebase, Databricks, Docker, Git, Model Context Protocol (MCP)