Katie Ng

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Education

Stevens Institute of Technology Hoboken, NJ

Bachelor of Science in Computer Science, Minor in Quantitative Finance (GPA: 3.63/4.00) Aug 2021 - May 2025

- Coursework: Data Structures, Algorithms, Web Programming, Database Management, Discrete Structures
- Activities: Pinnacle Research, Women in Computer Science, Society of Women Engineers (SWE), Alpha Phi
- Honors: Dean's List, Presidential Scholar, Edwin A. Stevens Scholar, Martha Bayard Scholar

Technical Skills

Languages: Python, Java, C++, SQL, R, Arduino **Web Technologies:** HTML, CSS, JavaScript

Tools: Pandas, Matplotlib, Git, Latex, Visual Studio Code, IntelliJ, Eclipse, RStudio

Experience

Blueprint: Technology for Non-Profits

President and Software Developer Sep 2022 - Present

- Founded a student organization at Stevens to develop pro-bono mobile and web applications for non-profits.
- Currently leading user research and redesign of internal tools and platforms, including a public-facing, full-stack web page to increase engagement.
- Facilitated communications between project development teams and non-profit clients to ensure quality of design and seamless handoff.

Extended Reality (XR) Laboratory

Lab Support Specialist Sep 2022 - Present

- Managed modules supporting university classes and research students in developing predictive models for antibody stability, editing genes using CRISPR-Cas9, and testing mechanical prototypes in virtual spaces.
- Launched pilot program for a graduate finance course, allowing the professor to host classes in virtual reality for more immersive learning.
- Trained 150+ students, 10+ faculty members, and 4 research teams to handle XR technologies and systems, including the Microsoft HoloLens 2, HTC Vive Pro, and Meta Oculus Rift.

Mobile AI Cybersecurity Computing (MACC) Laboratory

Undergraduate Researcher May 2022 - Nov 2022

- Assessed autonomous resource selection in cellular vehicle-to-everything (CV2X) communications, considering latency and Packet Reception Ratio as performance metrics.
- Evaluated the optimal resource selection window using pandas to ensure successful packet delivery.
- Developed traffic simulations in Eclipse SUMO, manipulated object behavior through the Traffic Control Interface (TraCI) API in Python, and applied vehicular communications in ns-3.

Projects

Digital Home Assistant Aug 2022

- Built a home assistant powered by Raspberry Pi to display upcoming calendar events and real-time news.
- Integrated Canvas and Amazon Alexa modules to display course assignments and to enable voice control.
- Styled user interface with CSS to color-code events and deadlines by category.

Music Recommendation System Apr 2022

- Implemented content-based filtering in Python to suggest new artists based on a user's music history.
- Resolved inconsistencies in collaborative code using modular programming and Github.
- Practiced programming a database to allow users to create and sign into profiles to store music preferences.

Weather Monitoring Station Dec 2021

- Directed a team of 3 through a product development process to design and assemble a circuit that monitors temperature, humidity, and light intensity.
- Implemented an automatic low power mode in Arduino to extend battery life to 21 consecutive days, as well as data validation checkpoints to minimize measurement errors.
- Designed several hardware prototypes in SolidWorks and assessed their feasibility based on metrics such as serviceability, print time, functionality, and consumer safety.