Katrina Rachel Panlilio Viray

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Education

University of Houston Expected May 2025

Bachelor of Science in Computer Engineering, Minor in Mathematics *Houston, TX*

- Cumulative GPA: 3.8/4.0

Experience

Microsoft May 2024 - August 2024

Software Engineer Intern - Availability Platform Team *Redmond, WA*

- **Technologies:** C#, Moq, PowerShell, KQL, Azure, JSON
- Established the first real time connection for Azure's repair and root cause analysis services for 200K+ customers
- Reduced VM downtime by 10+ minutes by using real-time root cause data of VM failures to fast track repairs in C#
- Improved root cause clarity for VM failures by querying fault info with KQL, updating 30% of Kusto's records
- Built an optimized decision tree for root causes, accelerating VM failure diagnosis by 50% for stop and destroy tasks

Burns & McDonnell May 2023 - August 2023

Systems Engineer Intern - Power Distribution Team *Houston, TX*

- **Technologies:** CYME, Python
- Implemented distribution automation strategies with reclosers for 10,000+ customers, reducing downtime by 25%
- Developed Python scripts to automate device placement on circuits within CYME, saving 100+ hours per year

NASA January 2023 - May 2023

Software Engineer Intern - Avionics Systems Team *Houston, TX*

- **Technologies:** Python, C, HalCoGen
- Created a Python GUI for a pick-and-place machine, boosting data entry efficiency by 70% by generating databases
- Automated the data logging process for circuit boards by generating code with Python, saving 30+ hours per year
- Developed a PID microcontroller with C and HALCoGen for stable and efficient temperature regulation in radiators

University of Houston February 2022 - December 2022

Undergraduate Research Assistant - Machine Learning *Houston, TX*

- **Technologies:** MATLAB
- Analyzed sleep signals from 5000+ patients using multiple linear regression, Linux cluster computing, and MATLAB
- Examined an EEG signal to perform artifact removal through signal analysis and filtering out delta and beta waves

Teaching Assistant - Microprocessor Systems *Houston, TX*

- **Technologies:** Assembly
- Reinforced low-level concepts such as memory devices and microcomputer architecture for 40+ students
- Led weekly labs, conducted office hours, helped students with Assembly, and graded assignments and exams

Projects

Recipeas Web Application | *MongoDB, Express.js, Node.js, React.js, Tailwind CSS*

- Built a full-stack web app with CRUD functionality and user authentication to store recipes with the MERN stack
- Developed and designed 10+ responsive UI/UX pages and components with React.js, Tailwind, and Figma

PID Motor Control System | *C++, Arduino*

- Designed an analog PID controller with operational amplifiers, enhancing DC motor stability and precision
- Programmed an Arduino for real-time data processing and DC motor control, achieving 35% faster stabilization

Leadership

Career Fair Committee Chair December 2021 - May 2023

Society of Women Engineers *Houston, TX*

- Led a team of 15+ to plan professional development events, connecting over 140 companies with 2000 students

Technical Skills

Languages: Python, C++, C#, C, JavaScript, HTML, CSS, PowerShell, KQL, Assembly, MATLAB
Frameworks & Libraries: React.js, Express.js, Node.js, Tailwind CSS, JSON
Developer Tools: Git, GitHub, SVN, MongoDB, Azure, Postman, Vercel, Figma