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
- **Relevant Coursework:** Data Structures, Computer Networks, Programming Applications in C

Experience

Microsoft May 2024 - August 2024

Software Engineer Intern - Azure Core, Elixir Team *Redmond, WA*

- **Technologies:** C#, PowerShell, KQL, Azure, JSON
- Increased repair efficency on virtual machines by 20% by building a decision tree for stop and destroy operations
- Linked Azure's repair and root cause analysis services for 100K+ customers by identifying key downtime causes

Burns & McDonnell May 2023 - August 2023

Systems Engineer Intern - 1898 & Co, Power Distribution Team *Houston, TX*

- **Technologies:** CYME, Python
- Utilized CYME software to implement distribution automation strategies through recloser, trip saver, and fuse placement for 10,000+ customers, resulting in enhanced reliability and reduced power outage downtime
- Developed Python scripts to automate device placement on circuits within CYME, saving 100+ hours per year

NASA January 2023 - May 2023

Software Engineer Intern - Command and Data Handling *Houston, TX*

- **Technologies:** Python, C
- 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
- Computed statistics and generated graphs to find a significant link between sleep signals for over 5000 patients between the stages of sleep using MATLAB and Linux cluster computing
- Examined an EEG signal to perform artifact removal through signal analysis and filtering out delta and beta waves

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

Pong | *C++, SDL2*

- Created Pong by implementing paddle movement, ball physics, and collision detection with OOP concepts

Pulse Oximeter | *C++, Arduino*

- Developed an Arduino-based embedded system to create a pulse oximeter for measuring oxygen saturation levels
- Programmed a PPG sensor to obtain pulse data and plotted the raw pulse signal on the serial plotter

Technical Skills

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