Mia Manabat

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EDUCATION

University of Notre Dame   **Notre Dame, IN**
Bachelor of Science, Computer Science | **GPA**: 3.99/4.0   *May 2023*
Honors and Activities: Dean's List, Society of Women Engineers, Robotic Football, Filipino American Student Organization
Relevant Coursework: Data Structures, Systems Programming, Computer Architecture, Logic Design and Sequential Circuits

SKILLS

Programming Languages: Proficient: Python, C++, C, MATLAB, ARM, Shell Scripting, Javascript, HTML/CSS; Familiar: Java
Software and Frameworks: Proficient: Angular, Linux Terminal, Vim, Git, Verilog; Familiar: Django REST, Autodesk Maya

EXPERIENCE

University of Notre Dame   **Notre Dame, IN**
Undergraduate Research Assistant: SAREC - DroneResponse Project   *Jun 2021 - Present*
- Design interactive tools for displaying the overall mission state using Graphviz in Angular and NodeJS and a multi-threaded simulator to carry out front-end and back-end tests utilized in a user study
- Engineered solutions to drone mission coordination with Python modules to receive, parse, and store data in REDIS and MQTT clients to publish messages to handlers to facilitate easier access and prevent loss of data
- Practice agile scrum methodology, conduct field tests, and construct programmable ROS race cars

Undergraduate Teaching Assistant: Intro to Engineering:Programming and Logic Design Courses   *Aug 2020 – Present*
- Enhance student learning through providing assistance during class, office hours, and labs, and independently organizing meetings with individuals and groups needing extra help
- Learn to quickly identify code and learning issues, provide class feedback, and design homework assignments and final projects in Python, MATLAB, and Verilog to evaluate comprehension

Amazing Design People List, Startup Company   **Remote**
Software Engineering Backend Intern   *Dec 2020 – Mar 2021*
- Collaborated with design and product team members across the globe to redesign models, develop API for the platform, and refactor code with templating for better readability using Python, Django REST framework, and PostgreSQL
- Performed weekly sprints, learned rapid application development in the fast-paced environment of a startup

City University of New York   **New York, NY**
Research Assistant   *Jun 2018 – Aug 2018*
- Devised algorithms under the supervision of a graduate student to identify patterns in protein folding
- Compiled structural files from an online database using Python scripts and Linux terminal, processed the data using file I/O and string parsing, simulated 3D modeling, and analyzed exposed surface area using atomic coordinates and radii

PROJECTS

Meeting Time Optimizer - Data Structures "Preternship" Project   *Mar 2021 - May 2021*
- Worked closely with Dr. Radia Perlman to create an interactive meeting scheduler utilizing Google forms and shell scripts to compile data, and Python scripts implementing data structures to calculate and display the optimized results
- Coordinated weekly meetings with a group of four peers to discuss pros and cons of structural code designs, organized on a shared Github repository, as well as practicing agile software development through formal reports

HLSM Puppy Simulator Co-Processor   *Oct 2020 - Dec 2020*
- Fabricated an HLSM in Verilog able to communicate and run concurrently with another processor sharing RAM/ROM
- Designed simulator by drafting state tables, mapping out block diagrams, and devising assembly instructions

LEADERSHIP

Computer Science for Good, *Community Outreach Director, Girls Who Code Director*   *Jan 2020 – Present*
- Liaise with representatives from nonprofits and high school STEM programs to identify tech-related needs and organize well-suited student teams, and partner with the university analytics club for more business-integrated projects
- Spearhead the launch of Girls Who Code programs at local high schools by organizing mentorship programs and career workshops to facilitate pathways for girls interested in computer science

Vietnamese Student Association of Notre Dame, *Event Coordinator*   *Jul 2020 – May 2021*
- Directed weekly board discussions to plan campus-wide events, gained university approval through activity requests, and coordinated with building managers to ensure events ran smoothly
- Responded to the challenge of COVID-19 limitations in the context of planning events that spread cultural awareness