KATIE MACALINTAL

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EDUCATION

Middlebury College **Middlebury, VT**
Bachelor of Arts in Computer Science *Expected May 2024*
GPA: 3.97/4.0 (College Scholar: Highest Academic Honor)
Relevant Courses: Data Structures, Algorithms and Complexity, Systems Programming, Computer Networks, Machine Learning, Crash Course in Systems Security, Software Development (Fall 2023)

SKILLS & CERTIFICATIONS

Languages: Python, JAVA, C, HTML/CSS, JavaScript
Tools & Technologies: Git, Linux, Visual Studio Code, Vim, Azure, Postman, Wireshark

EXPERIENCE

Microsoft **Redmond, WA**
SWE Intern for AI Cognitive Services *Jun 2023 - Present*
- Integrating team's summarization capabilities with GPT models in Python via plugins and function calling to lower the cost of generating high quality and accurate summaries in a chat environment
- Exploring personalized and secure GPT experiences by integrating the GPT model with Graph API capabilities and user authentication

Middlebury's Computer Science Department **Middlebury, VT**
Course Assistant for Introduction to Computing in Python *Sep 2021 - May 2023*
- Worked with up to 15 students to improve their foundational algorithmic coding skills during two-hour-long office hours
- Asked students guiding questions to help them debug their code and promote active learning, resulting in a deeper understanding of key coding concepts and improvement in their problem-solving abilities

Microsoft **Bellevue, WA**
Explore Intern (SWE + PM) for AI Cognitive Services *May 2022 - Aug 2022*
- Designed and developed a full stack website using React.js with two podmates for internal employees and 1P customers to demo our team's document and conversation summarization capabilities
- Called asynchronous summarization methods through REST API for users to easily and efficiently interact with services without needing external API tools, creating a more streamlined user experience

PROJECTS

Machine Learning Independent Project: Classifying Classical Music (Python) *Apr 2023 - May 2023*
- Utilized the librosa library to extract Mel-frequency cepstral coefficients (MFCCs) from the MusicNet dataset
- Developed a recursive neural network with long short term memory layers using the PyTorch library and trained it on MFCCs to classify whether a piece of music was composed by Beethoven
- Attained an average testing accuracy of 75%, surpassing the base rate of 48%

Systems Programming: Chat Server and Chat Client (C) *Dec 2022*
- Created a command-line based chat room on a local server utilizing ports, allowing multiple clients to connect and change their identifying nicknames
- Implemented multi-threading and mutual exclusion mechanisms to ensure efficient and synchronous communication of new connections, disconnections, nickname changes, and message exchanges to all clients

Systems Programming: Buffered Input/Output (C) *Oct 2022 - Nov 2022*
- Implemented functions analogous to open, close, read, write, and lseek
- Reduced number of system calls by strategically buffering data, resulting in improved overall performance
- Designed and executed comprehensive test cases to validate the behavior of all implemented functions, ensuring the reliability and correctness of the buffered functions

LEADERSHIP & COMMUNITIES

President and Treasurer, Middlebury's Women in Computer Science Club *Jan 2022 - May 2023*
Conferences: Grace Hopper 2021 Scholar/2022 Attendee/2023 Virtual Attendee, Rewriting the Code 2023 Career Summit, Tapia 2022 Scholar
Organizations: CodePath Student, Rewriting the Code Member, MiddCORE Summer Intern Lab 2021 Alum, Middlebury's South East Asian Society Member, Middlebury's Women of Color Member