Miles Kent

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Education

Georgia Institute of Technology | B.S. in Computer Science — Graduation: May 2027
Concentrations: Modeling and Simulation | Embedded Devices — Atlanta, Georgia
GPA 4.00

College of San Mateo — June 2023 - May 2024
GPA 4.00 | *Dean's List* — San Mateo, California

Experience

HyTech Racing | Developer — August 2024 - Present

- Ensuring reliability through memory and type safety, as well as expected value domains by developing unit and integration tests for the Torque Controller Multiplexer of the MCU, using PlatformIO
- Enabled smooth vehicle controller switching by developing a controller handler and state machine using RAII principles with C++, maximizing vehicle responsiveness and performance under variable conditions
- Improved accessibility for MCU firmware via documentation embedded with dynamically generated UML diagrams, which describe inheritance, class relations and structure, include dependencies, etc.
- Authoring documentation of the MCU firmware to enhance maintainability and readability, allowing a better streamlined understanding of the system architecture and potential failure modes for future team members

Meta Summer Academy | Co-instructor — June - August 2022

- Co-instructed C#, Unity, and VR implementation at Meta headquarters for 30+ high school students participating in the Meta Summer Academy, partnered with the nonprofit Mission Bit
- Held lectures and provided educational content to students with regards to development on the Oculus VR, fundamental programming concepts, and the workflow between Unity, Git, and C#

Projects

Multiple Neighbor Cellular Automata Simulation

- Developed C++ simulation of multiple neighborhood cellular automata using SFML for rendering the cellular automata, capturing and handling user I/O, and enabling cross-platform portability
- Simulation logic such as the rules for the cellular automata and rendering implemented using GLSL shaders, allowing for more efficient computation by delegating logic to parallel processing on the GPU

Vocab Acquisition and Comprehension Tool

- Developed C++ software for enhancing foreign language acquisition by making the process of acquiring vocabulary more systematic through persistent categorization of vocab by frequency and familiarity
- Implemented interactive ncurses user interface, Vim bindings, took advantage of run-time polymorphism for better readibility, as well as data structures and and file I/O to improve functionality

Honors and Awards

College of San Mateo Dean's List
California State Seal of Biliteracy in Chinese
College of San Mateo Hackathon - 1st
AP Scholar with Distinction

Relevant Coursework

Machine Architecture (C and MIPS Assembly)
Computer Networking
Physics: Mechanics, Electromagnetism
Programming/Data Structures in C++
Multivariable Calculus
Linear Algebra

Skills

Programming Languages: C/C++, Python, Java, C#, Rust, Julia, Bash, GLSL, Nix, MIPS Assembly
Software and Tools: Git, GNU/Linux, Windows, PlatformIO, CMake, LaTeX, Unity, Godot, MS/Google Suite