NickMears

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An imaginary software engineer with determination to deliver well thought out honest work that is modern and fast. With well rounded experience he is determined to provide insight to create simple and functional code to get the job done.

Education

Worcester Polytechnic Institute: Bachelors of Science in Physics with a minor in Computer Science
GPA: 3.75 Graduated May 2019 with High Distinction

Skills

C++, java, python, POSIX, bash, concurrent programming, socket programming, source control, jira, linear algebra, differential equations, graph theory, embedded systems, UML, modeling and simulation, working with other people

Work Experience

Software Systems Engineer

MITRE, 202 Burlington Rd, Bedford MA, October 2019 - Current
Worked as an intermediate level software engineer for the Emerging System Engineering Technologies department at MITRE. The primary responsibility of the job was to support sponsor projects in the role of connecting different digitial tools together to expand their use. A lot of the work focused on modeling and simulating systems and software using SysML and UML modeling languages in tandem with simulation tools, real world api's and hardware.

Projects

uml-cpp

Personal project June 2020 - current
After being frustrated with antiquated apis and not being able to directly interact with the apis from embedded systems I decided to take on the responsibility of creating a modular api in c++ that follows the uml 2.5 specification in my free time. It is not complete yet but you can find it on my github: https://github.com/nemears/uml-cpp

Physics Tool UML Integration

Major project at Mitre, November 2020 - October 2021
Was the main developer behind a tool that linked the syntax of physics simulation engine to a UML diagramming tool, Magicdraw. The physics simulation tool had its own syntax and filetype that had not been parsed into and emit out from UML diagrams before. The task took the engines syntax and mapped it to visual diagrams within the UML tool and used those diagrams edited or not in the tool to export back out to functional code.

Simulation Tool for Aircraft System Testbed

Major project at Mitre, January 2021 - current
Lead developer behind reusing an aircraft simulation tool as a pipeline to test software against the physical inputs from the overall system it would be on. The work involved adding message apis to the events and simulated messages in the simulation. Also worked on porting windows c to Posix to have simulation engine containerized and easily deployable.