## Worcester Polytechnic Institute (WPI) – Worcester, MA – *B.S. Computer Science* – August 2022-May 2027

I am a junior Computer Science student with formal training in operating systems, systems programming, and compiler design. Proficient in C/C++, Python, and Linux systems. Seeking a systems-focused internship to contribute to backend services, distributed infrastructure, or systems tools, with a strong focus on performance, reliability, and scalability.

# Experience

## THINKLOGICAL, A Belden Brand – Milford, CT – *Software Engineering Intern* – May 2023-August 2023

* Maintained C-based firmware for Thinklogical’s KVM switches using a customized Eclipse IDE for NIOS, enhancing system reliability and networking functionality.
* Collaborated with senior engineers to test and debug embedded firmware in a live hardware lab, identifying and resolving signal timing issues using serial debugging tools.
* Developed a C# desktop utility to streamline firmware updates for KVM devices, improving user accessibility and reducing manual update errors.

# Skills

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| Programming Languages C, C++, C#, Java, JavaScript, Kotlin, Python, REACT, Rust, SQL | Technical Skills Linux, Embedded Systems, System Calls, Memory Management, Concurrency, Networking Protocols | Tools & Platforms ACID, Databricks, DBeaver, Docker, Eclipse, ETL, Git, IntelliJ, NIOS, NodeJS, NoSQL, RDBMS, Spark, PyCharm, Visual Studio |

# Relevant Coursework

## Software Engineering – Full-stack app development using React, Agile methodology, Git workflows

## Operating Systems (Graduate) – Process scheduling, concurrency, memory management, file systems, distributed OS, security

Computer Networks – Network layers (OSI/TCP-IP), transport and network protocols, routing, socket programming, application protocols

Systems Programming Concepts – Low-level programming, memory and process management, synchronization, system calls, file system basics

Techniques of Programming Language Translation – Lexical and syntactic analysis, semantic checks, intermediate code generation, code optimization, code generation

Foundations of Computer Science – Logic, sets, relations, functions, proof methods, automata theory, computability

Database Systems – Relational data model, SQL, database design (ER, normalization)

Algorithms – Divide-and-conquer, greedy algorithms, dynamic programming, heuristics, probabilistic algorithms, optimization

# Relevant Projects

## Multithreaded CPU Scheduler – C, POSIX Threads, Linux – Operating Systems (Graduate) – Summer 2025

* Implemented a multilevel feedback queue (MLFQ) CPU scheduling simulation in C, using POSIX threads and semaphores.
* Modeled time-slicing and priority queues to evaluate performance tradeoffs in real-time vs batch systems.

## Configuration for NIOS KVM Switches – C, Embedded Systems, NIOS – THINKLOGICAL – Summer 2023

* Developed embedded C code for configuring switch operation modes (duplex settings, download speeds, etc.) on Thinklogical’s proprietary KVM switches.
* Implemented control logic for different networking protocols and interfaced with hardware through NIOS-specific memory-mapped I/O.
* Tested and debugged firmware behavior in a live hardware lab using serial debugging and logic analyzers.