Mark Pizzutillo

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Experience

IBM, Austin, TX – *Memory Development Software Engineer*

JANUARY 2019 – PRESENT

- Writing software/hardware procedures to initialize and test DRAM modules of IBM Power Systems
- Responsible for code to initialize DDR4/5 DIMM PMIC power regulation chips in IBM Power 9A/10 systems
- Gaining experience interfacing with teams around the United States and abroad

Lockheed Martin, Moorestown, NJ - *Software Engineering Intern*

MAY 2018 – AUGUST 2018

- Aided in development of military training software to be deployed worldwide
- Developed an understanding of both front-end and back-end components and their interactions
- Gained experience in working within large collaborative, source-controlled projects

Education

Pennsylvania State University, University Park, PA - B.S. Computer Engineering

DECEMBER 2018 - 3.72 GPA

- Achieved Dean's List status from second semester onward
- Minor in Music Performance (Percussion)
- Consistently enrolled in 20+ semester credits in addition to numerous activities

Projects

3D Chess for iOS

- Creating a SceneKit front-end to a chess logic library
- Gaining an understanding of iOS game design paradigms and APIs
- Focusing on a positive user experience by making use of animations and intuitive UI

Malloc Lab

- Developed a unique version of the C language memory allocation function
- Incorporated a segregated linked-list data structure to organize and defragment free data blocks
- Expanded knowledge of pointer utilization and arithmetic

Verilog Model CPU

- Designed 5-stage pipelined CPU in Verilog HDL
- Supported a subset of the MIPS ISA, including simple ALU (arithmetic) operations
- Obtained an understanding of the inner workings of modern pipelined processors

User-Space Synchronization and Thread Library

- Constructed a library of C synchronization primitives including mutexes, condition variables, and semaphores
- Implemented a threading library, supporting creating, closing, and joining of threads
- Gained experience in concurrent programming

Skills

Technical/Software

- Proficient in Java, C, C++, C#, Swift
- Experience with Python, x86, SQL, MIPS, Verilog
- Development experience with Xcode, Visual Studio, Linux/Unix, NI Multisim, Xilinx Vivado, GDB, GIT

Other

- Accustomed to Agile workflow
- Active musician performing with Penn State Philharmonic, Wind Ensemble, Percussion Ensemble, musical, and jazz combos