Emmanuel Massaquoi

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Education

- **Boise State University** Boise, ID
  Bachelor of Science in Computer Science *Anticipated May 2019*
  - **Selected Coursework**: Data Structure and Algorithms, Operating Systems, Web Development, Databases, and Distributed Systems.

Selected Projects

- **Singly and Doubly Linked list implemented in Java**: Both linked list are node implementation of the IndexedUnsortedList interface with fully functional iterators. I created a test suite to ensure correct functionality of the linked lists and iterators.
- **Identity Server and Client implemented in Java (Team Project)**: We implemented a Remote Method Invocation (RMI) based identity server. The Client connects to the identity server and submits a new login name request with the real name of the user. The server checks its database and responds back with a Universally Unique ID (UUID) if the new login does not exist or returns with a error. The server permits reverse lookups, and periodically saves its state on disk so that it can survive crashes and shutdowns. Clients and server communications were encrypted. The server was also replicated to improve reliability. My teammate and I discussed and plan the design of the identity server and client. Most of the code that implemented our design was written by me, with my teammate conducting code review in a pair programming technique.
- **Developed a Shell program in C**: My mini shell support filename completion and the history command implemented using the GNU readline and ncurses library. Also added some basic built-in commands exit and change directory. The shell can handle end of file (EOF), prompt changes, background jobs, jobs list, empty command, and basic signal. I use Makefile as my build system, use git for source code management, valgrind to resolve memory errors and leaks, trello for project management, gdb for debugging and software documentation tool doxygen to generate documentation.

Skills

- **Languages**: Java, C++, C, Python, JavaScript, HTML, CSS, Ruby on Rails, PHP 5, and SQL.
- **Technologies**: Git, Vim, Sublime, Eclipse, IntelliJ IDEA, CLion, Docker, Make, Doxygen, Valgrind, GDB debugger, Linux, OSX, and Windows

Experience

- **Boise State University Research Computing** Boise, ID
  Summer Intern *June 2018 - August 2018*
  - **High Performance Computing (HPC) Cluster Administration**: Focus on HPC and scientific/engineering computing, deep technical support for HPC users and applications, HPC application and system performance analysis, delivery and support of HPC software development environment tools.
  - **Help-desk Services**: Help-desk services for some BSU's simulation codes, and development, delivery and support for scientific data analysis capabilities.
- **Boise State University MURI Summer Research Fellowship** Boise, ID
  Undergraduate Research Assistant *June 2017 - August 2017*
  - **Research**: Researched and wrote a white paper on the use of Big Data in water management. Presented findings at undergraduate summer research symposium.
  - **NSF proposal**: Participated in the development of a NSF proposal.
- **Boise State University LSAMP Summer Research Experience (REU)** Boise, ID
  Undergraduate Research Assistant *June 2016 - August 2016*
  - **Research**: Help designed and collected data for usability studies on products that require users to interact with digital environments ranging from commercial interactive tutoring systems to mobile devices.

ACHIEVMENTS AND ACTIVITIES

- **Summer Research Symposium**: Presented research at the summer Research Symposium at Boise State University August 2016 and August 2017.