Rohith Rokkam

education

Stony Brook University
B.S. Comp. Sci., Math
Honors Computer Science
GPA: 3.9
graduation: spring 2019

contact

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interests

algorithm design, high-performance computing, concurrent data structures

experience

2018-19 **Center for Computing Research, Sandia National Labs, Albuquerque, NM**
As an intern, Contributed to parallelization facilities for PEBBL, a MPI-based C++ framework for solving branch-and-bound problems. Paper titled "The Implementation of Parallel Bounding in PEBBL" forthcoming in the Sandia Intern Proceedings.

projects

2018 **Peer-to-peer Filesystem**
A distributed filesystem similar to Airdrop, written using the Python bindings for the FUSE library. The P2P network is hosted by a multithreaded bootstrap server. Mountable on Linux and MacOS.

2018 **Terminal Chat Service**
A terminal chat client in C and multithreaded server in Python. Messages are sent using a custom plaintext protocol.

2018 **Packet Sniffer**
A packet sniffer implemented using Python's raw sockets. Dumps packets to human-readable, hex, or pcapng (Wireshark-readable) forms as desired. Optionally filters packets by protocol.

2017 **Dynamic Memory Allocation Library**
A memory allocator developed in C, using a first-fit allocation policy. Stores free blocks with a variable-size segmented free-list. Borrows several optimizations from glibc's malloc, such as use of a wilderness block.

2017 **Shell**
A shell written in C with bash-like features, including output redirection, piping, and job control.

2017 **Memcached Clone**
An in-memory caching service in C, implemented using a custom multithreading-safe queue and hashmap.

2016 **Navigation System**
A Google Maps-like application developed in Java using the OpenStreetMap API and an XML parser. Implements Djikstra's shortest-path algorithm to compute shortest routes.

teaching

2018-19 **Teaching Assistant: Theory of Computation**
Wrote & graded homework on finite automata, formal languages, and Turing machines. Also taught as a substitute.

2017 **Teaching Assistant: Foundations of Computer Science**
Instructed 20-person recitation section on discrete math, logic, and proof techniques.