Rohith Rokkam

B.S. Computer Science (Honors) and Mathematics, Summa Cum Laude
Stony Brook University, Spring 2019

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experience

Research and Development Intern – Sandia National Labs **06/18 - 06/19**
- Contributed to parallelization facilities for an MPI-based C++ solver framework.
- Wrote dynamic MPI code with scalability for supercomputers in mind.
- Maintained legacy compatibility as major updates were made to the software.

Teaching Assistant – Theory of Computation **Spring 2018/19**
- Designed & graded regular homework assignments for a class of 25 students.
- Gave substitute lectures on several occasions when the professor was unavailable.
- Wrote exam questions on finite automata, formal languages, Turing machines, and complexity theory.

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

projects

Canvassing Application **Fall 2018**
- Collaborated to build a JavaScript web app for managing door-to-door campaigns.
- Made a microservice in Python using MongoDB and Google's OR-Tools.

Peer-to-peer Filesystem **Spring 2018**
- Wrote an Airdrop-like P2P service for Linux and MacOS using Python's FUSE bindings.
- Designed a custom protocol and multithreaded bootstrap server to host the network.

Packet Sniffer **Spring 2018**
- Implemented a packet sniffer using raw sockets in Python.
- Writes packets in human-readable, hex, or pcapng (Wireshark-readable) formats, and can filter by protocol.

Dynamic Memory Allocator **Fall 2017**
- Developed a malloc library in C, using first-fit allocation with a segmented free-list.
- Implements some optimizations from glibc malloc, ex: wilderness block.

Shell **Fall 2017**
- Written in C with bash-like features and syntax, including output redirection, piping, and background jobs.
- Carefully implements UNIX signal handling and process life-cycle management.

Navigation System **Fall 2016**
- Developed in Java using the OpenStreetMap API and an XML parser, with functionality similar to Google Maps.
- Wrote a custom implementation of Djikstra's shortest-path algorithm for directions.

organizations

SBU Algorithms Lab **01/19 -**
- Discuss research topics in the theory of computer science.
- We read papers on topics related to the theory of computer science and present the topics to one another.
- algorithms, discrete math, probability, high-performance computing, data structures, concurrency

SBU Go Club **Fall 2017 - Spr. 2019**
- secretary, dc trip, gotham

SBU Undergrad Algorithms Reading Group **Fall 2017 - Spr. 2018**
- Present algorithms and data structures of interest.