

Rohith Rokkam

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

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experience

- 06/18 - 06/19 **Research and Development Intern** **Sandia National Labs**
- Contributed to parallelization facilities for PEBBL, a C++ branch-and-bound framework. CCR
 - Wrote dynamic MPI code with a focus on minimizing communication overhead and maintaining legacy compatibility.
- Spring 2018/19 **Teaching Assistant** **Theory of Computation**
- Wrote & graded homework and exams on finite automata, formal languages, Turing machines, and complexity theory.
- Spring 2017 **Teaching Assistant** **Foundations of Computer Science**
- Instructed 20-person recitation section on discrete math, logic, and proof techniques.

projects

- Fall 2018 **Canvassing Application**
- 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.
- Spring 2018 **Peer-to-peer Filesystem**
- 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.
- Spring 2018 **Packet Sniffer**
- 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.
- Fall 2017 **Dynamic Memory Allocator**
- Developed a malloc library in C, using first-fit allocation with a segmented free-list.
 - Implements some optimizations from glibc malloc, ex: wilderness block.
- Fall 2017 **Shell**
- 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.
- Fall 2016 **Navigation System**
- Developed in Java using the OpenStreetMap API and an XML parser, with functionality similar to Google Maps.
 - Wrote a custom implementation of Dijkstra's shortest-path algorithm for directions.

organizations

- 01/19 - **SBU Algorithms Lab**
- 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
- Fall 2017 - Spr. 2019 **SBU Go Club**
- secretary, dc trip, gotham
- Fall 2017 - Spr. 2018 **SBU Undergrad Algorithms Reading Group**
- Present algorithms and data structures of interest.