

Rohith Rokkam

B.S. Computer Science (Honors) and Mathematics
Summa Cum Laude (GPA: 3.92), Stony Brook University, Spring 2019
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Experience

- Research and Development Intern – Sandia National Labs** 06/18 - Present
- Contributed to parallelization facilities for a C++ solver framework.
 - Wrote scalable dynamic MPI code and maintained legacy compatibility.
- Teaching Assistant – Theory of Computation** Spring 2018/19
- Designed and graded homework for 25 students.
 - Lectured the class as a substitute when the professor was unavailable.
 - Co-wrote exams on automata, formal languages, Turing machines, and complexity theory.
- Teaching Assistant – Foundations of Computer Science** Spring 2017
- Helped a 100+ person class learn discrete math, logic, and proofs.

Selected Projects

- Canvassing Application** Fall 2018
- Collaborated on a JavaScript web app for managing door-to-door campaigns.
 - Implemented VRP algorithm using MongoDB and Google OR-Tools in Python.
- Peer-to-peer Filesystem** Spring 2018
- Wrote an Airdrop-like P2P service in Python using FUSE and a custom protocol.
 - Made a multithreaded bootstrap server to host the network.
- Packet Sniffer** Spring 2018
- Created a packet sniffer using raw network sockets in Python.
 - Added output filters for protocols including TCP, UDP, IP, Ethernet, and DNS.
- Dynamic Memory Allocator** Spring 2018
- Developed a memory allocation library in C using a segmented free-list.
 - Implemented several optimizations from glibc malloc.
- Caching Service** Fall 2017
- Wrote an in-memory LRU cache in C similar to Memcached.
 - Created concurrent queue and hashmap structures to hold cached data.
- Bash-like Shell** Fall 2017
- Made a shell in C capable of output redirection, piping, and background jobs.
 - Eliminated race conditions and handled asynchronous UNIX signals.
- Navigation System** Fall 2016
- Developed a GPS in Java using the OpenStreetMap API.
 - Implemented shortest-path finding with Dijkstra's algorithm.

Organizations

- SBU Algorithms Lab** 01/19 - Present
- Discussed methods in theoretical computer science with undergrads and Ph.D. students.
 - Gave presentations on topics in algorithms, discrete math, and data structures.
- SBU Go Club – Secretary** Fall 2017 - Spr. 2019
- Organized annual 10-15 person trips to Go tournaments in NYC and Washington, D.C.
 - Hosted annual all-day Go tournaments at Stony Brook with 40+ entrants.
 - Held meetings twice a week and taught new players how to play.
- SBU Undergrad Algorithms Reading Group** Fall 2017 - Spr. 2018
- Presented algorithms, data structures, and logic puzzles of interest.

Selected Coursework

Graduate: Algorithms (audited, Ph.D. section), Probability Theory, Modern Algebra
Undergraduate: Operating Systems, Linear Algebra, Differential Geometry, Multivariate Analysis