

# 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 - 08/19
- Contributed to parallelization facilities for a C++ solver framework
  - Wrote dynamic MPI code to run efficiently on large computer clusters
  - Maintained API for legacy compatibility while making major internal software updates
- 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
  - Instructed a 25-person weekly recitation section

## 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 with features including 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 open-source OpenStreetMap API
  - Implemented Dijkstra's algorithm to compute point-to-point directions

## Organizations

- SBU Algorithms Lab** 01/19 - Present
- Presented on topics in algorithms, discrete math, and data structures
  - Discussed methods in theoretical computer science with undergrads and Ph.D. students
- SBU Go Club – Secretary** Fall 2017 - Spr. 2019
- Organized annual 10-15 person trips to Go tournaments in Washington, D.C. and NYC
  - 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
- Undergraduate: Operating Systems, Linear Algebra, Differential Geometry, Multivariate Analysis