AKHIL BHANDARU

U.S. Citizen
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Markforged, Software Intern
MAY 2019 - PRESENT, CAMBRIDGE, MA.

- Developed internal G code visualization tool for post-slicing analysis. Used AWS Lambda and S3 to store .stl files and slice parts for G code viewing. App was built using electron and later ported to a non-desktop format.
- Developed java script interface for web assembly compiled polygon clipping library (via Angus Johnson), improving part slicing by roughly 40% in execution time.
- Helped update 3D slicing pipeline to path parts in parallel. Improved pathing execution time by 1.2x for every additional core used.
- Built out major software related to newest sintering furnace product release. Developed an algorithm for determining part fit using geometrical rotations and translations.

CS 4820: Algorithms, TA
MAY 2019 - PRESENT, ITHACA, NY

- Teaching assistant for Cornell computer science course: CS 4820 Introduction to the Analysis of Algorithms. Developed numerous coding assignments and proof based problems, and help teach a monthly computer science seminar called Level Up.
- Helped create a course internal submission uploader and tester. The internal tool allows students to submit their code and get valuable feedback in the form of compilation errors…, TA comments, and custom test generation.

CS 3410: Systems, Head TA
JANUARY 2018 – MAY 2019, ITHACA, NY

- Lead the switch from MIPS to RISC-V assembly language. Lead course staff of 30, hosting teaching seminars and material refreshers.
- Built RISC-V assembler and Simple Java to RISC-V compiler. Built for open source tool called Logisim, a logic gate and computer system organization software.
- In charge of course website. Refactored site for ease of update and implemented cron task site updater using Git and basic ruby.

Super Cloud Group, Undergraduate Researcher
MAY 2018 – PRESENT, ITHACA, NY

- Helped my mentor Shannon Joyner develop Ripple, a protein recognition tool using AWS lambda and a basic machine learning and data analytics tooling.
- Attended ACM/IEEE Symposium on Architecture for Networking and Communications Systems.

Cornell University, Resident Advisor
AUGUST 2018 – PRESENT, ITHACA, NY

- Resident Advisor and member of Residential and New Student Program.
- Work with students to organize and run exciting on and off campus programs.

Summary

LANGUAGES
Coffee Script, Java Script, Java, Python, C/C++, Rust, OCaml, SQL

TECHNOLOGIES / FRAMEWORKS
Node, AWS Lambda, React, Angular 4, Electron, Express, REST, Web Assembly, MongoDB, GraphQL, PostgreSQL, Redis, Numpy, Scipy, PyTorch

SOFTWARE
IntelliJ, VSCode, Git, GDB, Repetier Host, Markforged's Eiger

Education

CORNELL UNIVERSITY
B.A. Computer Science and Mathematics

GPA: 3.5

LYNBROOK H.S.
Cum Laude 2016

Background

CORE ACADEMICS
Data Structures and Algorithms, Distributed Computing, Systems Programming, Operating Systems, System Security, Numerical Analysis, Scientific Computing, Number Theory

Honors

AIME QUALIFIER, 2015, 2016
DEANS LIST, 2019
TA RECOGNITION AWARD, 2019

Interests

Rock Climbing
Scientific Computing