

AAKASH PRABHU

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EDUCATION

- **University of California, Davis** **Davis, CA**
Master of Science (M.S) in Computer Science; GPA: 4.00 Sep. 2019 – Jun. 2021
- **University of California, Davis** **Davis, CA**
Bachelor of Science (B.S) in Computer Science and Engineering; GPA: 3.80 Sep. 2015 – Jun. 2019

TECHNICAL SKILLS

- **Languages:** C, C++, Java, Python, Bash Scripting **Tools:** Google Test, Boost, JenkinsCI, Docker
- **Frameworks:** CUDA, OpenMP, Neo4J, Flask, React.js **Other:** UNIX/Linux, Git, Vim, Agile, Testing

EXPERIENCE

- **UC Davis** **Davis, CA**
Graduate Student Researcher and Instructor Sep 2019 - Present
 - **Research Assistant (Algorithms and Computational Geometry):** Researching game theoretic models of computation to effectively determine upper bounds on the maximum number of equi-partition points in generally positioned point sets. Also developing a **scalable library** for these simulations in Mathematica.
 - **Research Assistant (CS Education):** Developing an open source class titled the “The Missing CS class” that focuses on UNIX tools, effective debugging, testing, and shell scripting strategies.
 - **Instructor:** Taught a course and developed curriculum for **probability and statistical modeling** to over 100 undergraduate students. Average teaching evaluation score: *4.8/5.0*
- **Davis Computer Security Lab** **Davis, CA**
Research Intern Jan 2019 - Jun 2019
 - Efficiently randomized the C library’s memory allocator with **minimal space overhead** to prevent vital security exploits and determined effectiveness by running deterministic attack scripts.
 - Implemented randomization techniques per system boot, per process, per allocation. Thwarted **over 80%** of the attacks with a **success rate of 98%**.
- **LendingClub** **San Francisco, CA**
Software Engineering Intern Jun 2018 - Sep 2018
 - Built a Java full stack application that automated over **30 engineering metrics** across all technology teams, services, products in the company. Used Neo4J for database management.
 - Implemented a multi-threaded collector to Automate the collection of metrics from NewRelic, Splunk, Wavefront and improved collection performance **by a speedup of 5x**.
 - Created a **react.js application** for teams to visualize and analyze their service performance over multiple sprints.

PROJECTS

- **Mood Tracker and Analyzer:** Built an award winning custom medical app which enables patients to analyze their mental states through data visualization. Efficiently used **IBM Watson’s API and D3.js** to create a sophisticated visualization tool.
- **Warcraft 2 Remastered:** Worked in a **team of 10** to maintain and develop an existing code base of the popular strategy game in C++. Added new features such as multi-player support and a scriptable AI bot for the game.
- **Discrete Mesh Parametrizer:** A C++ library to efficiently parametrize discrete conformal meshes and compare the effectiveness and robustness of each parametrization technique.
- **Image Blurring on the GPU:** Simple tool that exploits maximum task level parallelism with a **10x speedup** using CUDA to blur images. Efficiently handles large, high resolution pictures.
- **Simple Shell:** Designed and implemented a simple shell in C that could efficiently handle and execute UNIX commands. Implemented key shell features such as piping, redirection, and background processes.

HONORS AND AWARDS

- **Awards:** Outstanding Senior - Gold Medal (2019), Department Citation (2019), Teaching Assistant of the Year (2018)
- **Honors:** Graduate Research Fellowship (2020), UC Davis Annual Fund Scholarship (2019), Magna cum Laude (2019)