Srinivasan Madhavan

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EDUCATION

University of California, Berkeley   **(Aug 2019-May 2022)**

B.S. in Electrical Engineering & Computer Sciences, GPA: 3.86

- Relevant coursework: Structure and Interpretation of Computer Programs (CS 61A), Data Structures and Algorithms (CS 61B), Designing Information Devices and Systems I (EECS 16A), Designing Information Devices and Systems II (EECS 16B), Multivariable Calculus (Math 53).

EXPERIENCE

Macrosystems Ecology Laboratory, UC Berkeley | Undergraduate Researcher   **(Feb 2020 - Present)**

- Working under Dr. Benjamin Blonder to apply machine learning to segment vein networks and quantify their traits, eliminating time-consuming human labor in leaf vein research and potentially providing new insight in developing real-world transportation networks.

EECS 16A | HW Grading Academic Student Employee   **(Jan 2020 - Present)**

- Grade and provide feedback on homeworks for UC Berkeley's introductory electrical engineering course.
- Cover linear algebra, circuits, and introductory machine learning concepts.

Referee | Group Project   **(Nov 2019 - Present)**

- Developed a cheap alternative to expensive goal-line technology for soccer matches with a single smartphone, built with Flutter and TensorFlow Lite at Stanford's hackathon, TreeHacks.

Speech Matrix Solver | Group Project   **(Nov 2019 - Dec 2019)**

- Built a web interface that can solve linear systems of equations by performing Gaussian Elimination on an augmented matrix verbally dictated by the user, built using JavaScript and HTML5.
- Demonstrated the project to our EECS 16A professor and received extra credit.

Computer Science Undergraduate Association (CSUA) | Officer & Developer   **(Sep 2019 - Present)**

- Hold office hours where students can receive help with classwork and also interact with their peers.
- Used Django to develop features for the CSUA website (csua.org) such as:
  - A navigation bar link to the CSUA wiki.
  - A form that streamlines addition of officers to the website.

Investigating Real-time Mapping of Roads by Self-Driving Cars | Independent Project   **(Sep 2018 - Dec 2018)**

- Simulated a car (represented by a point) traveling along a curve (eg. $y = x^2$) using PID control.
- Achieved real-time mapping through an implementation of the least squares algorithm.
- Utilized the matplotlib framework in Python to generate graphs of the car's path.
- Wrote a formal paper describing results.

Beaver Works Summer Institute at MIT | Participant   **(Jun 2018 - Aug 2018)**

- Used ML, LIDAR, and computer vision to create a fully autonomous racecar that successfully navigated a course with traffic lights and obstacles like ramps, "pedestrians", and walls.
- TensorFlow, Python, and OpenCV.

AWARDS

- AIME Qualifier   **(2018)**
  - The top 5% of scorers on the AMC 12 math contest take the AIME exam to eventually select the IMO team.

PROGRAMMING LANGUAGES: Python, Java, C#, JavaScript, HTML/CSS, SQL, Scheme