Amlesh Sivanantham

🌐 3025 Royal Street, Los Angeles, CA 90007

✉ samlesh@gmail.com · ✉ sivanant@usc.edu · 📱 (408) 219-6474 · ⦿ zamlz

★ Skills

Languages: Python, C, C++, LaTeX, Bash, Zsh, Javascript, HTML

Libraries: TensorFlow, NumPy, OpenCV

Technologies: Linux, Unix, Git, Scrum, Vim

🎓 Education

University of Southern California   **August 2017 - Present**

Computer Science: Intelligent Robotics M.S.

University of California, Santa Cruz   **September 2013 - June 2017**

Computer Engineering B.S.
Computer Science B.S.

💼 Experience

Graduate Research Assistant   **September 2017 - Present**
University of Southern California - Robotic Embedded Systems Laboratory
Perform graduate research in Deep Reinforcement Learning and it's application to Robotics. Work for a PhD student on research problems related to perception and navigation with reinforcement learning.

Undergraduate Research Assistant   **September 2016 - June 2017**
University of California, Santa Cruz - Jack Baskin School of Engineering
Performed undergraduate research in Machine Learning and Deep Learning for the S.E.A.D.S. project to study ways to analyze time-series data.

📖 Projects

Quadcopter Reinforcement Learning Agent - (*USC Robotics Embedded Systems Laboratory*) - Working on building an Reinforcement Learning agent that is capable of navigating quickly through a cluttered environment. Train the agent in simulation, and transfer the learnt policy to a real-world quadcopter. *IN PROGRESS*

Anomaly Detection in Time Series Data - (*Undergraduate Senior Thesis*) - Researched Deep Learning and implemented a long short-term memory network that identifies if a given time-series sequence of a particular time series system is anomalous or not. The dataset that I worked with was provided by my faculty advisor which corresponds to the energy usage of an electric meter on the circuit that provides power to the water pump. After training, the network was able to identify anomalies with an accuracy of 90%.

🔭 Research Interests and Hobbies

I am interested in Artificial Intelligence and Robotics. Particularly, I want to focus on the field of Deep Learning and its application to cyberphysical and social problems. I am also very interested in Deep Reinforcement Learning such as AlphaGo. My other hobbies include a variety of things such as researching about Linux, Physics and Astronomy. I also practice the Violin and can solve a variety of different rubik's cubes.