SRINATH NAIK AJMEERA

+12133576173 | srinath@cs.ucla.edu | Master's in Computer Science , University of California Los Angeles |
https://web.cs.ucla.edu/~srinath

Research Interests

Broadly into Machine Learning, Artificial Intelligence and Robotics

Education

University of California Los Angeles (UCLA), Los Angeles, CA
Master's in Computer Science - GPA 4.00/4, *Expected December 2022*

Indian Institute of Technology Bombay, Mumbai
Bachelor's in Computer Science & Engineering - GPA 8.26/10, *May 2018*

Key Projects

Mode collapse in Generative Adversarial Networks *UCLA*
Guide: Prof. Quanquan Gu *(October 2021 - December 2021)*

- Explored GANs and its variations, focusing on mode collapse problem by performing an extensive survey
- Identified key mitigation strategies based on regularization, manifold-guide and multi-generator techniques, proposed open directions of research

Enhancing SLAM in dynamic environments *UCLA*
Guide: Prof. Ankur Mehta *(October 2021 - December 2021)*

- Devised to an algorithm to detect dynamic objects from video using semantic segmentation(Detectron2), followed by applying motion vector clustering and generating a probabilistic pixel wise motion model
- Integrated it into ORB-SLAM2 to make use of only static keypoint for localization, mapping & loop closing, resulting in ORB-SLAM robust to dynamic objects in scene

AI powered robot in virtual Icecream Gridworld *UCLA*
Guide: Prof. Ankur Mehta *(October 2021 - December 2021)*

- Created a simulator for Icecream Gridworld with a robot, handling dynamic goal states, rewards and transition probabilities.
- Implemented and tested Policy Iteration, Value Iteration algorithms to calculate optimal policy and Probabilistic Road Map(PRM), Rapidly exploring Random Tree(RRT) for path planning.

Smart phone based digitization of printed books *IIT Bombay*
Guide: Prof. Shivaram Kalyanakrishnan and Prof. Siddhartha *(July 2017 - May 2018)*

- Built a limited speech command classifier using CNN on spectrograms of one second long custom commands collected from various people. The classifier is integrated into mobile app for custom capturing
- Invented a method to automatically extract single page images of left and right part from captured two page image of book. Single page images are curved and hence later fed to a de-curling engine based on a pre-trained Neural Network model, giving us flat page as output for better OCR.

Ripe fruit detection for citrus crop yield prediction *IIT Bombay*
Guide: Prof. Ajit Rajwade *(January 2017 - April 2017)*

- Implemented an algorithm to detect ripe fruits in citrus crop images. Used Circle Hough Transform(CHT) to extract circular objects in image, then small rectangular patches from those areas are classified using SVM based classifier to infer objects as raw or ripe fruit.

Professional Experience

Amazon *Bangalore, India*
Software Development Engineer *(April 2021 - August 2021)*

Smart Squad Digital Solutions *Bangalore, India*
Software Architect, Developer *(March 2020 - March 2021)*

Apple *Hyderabad, India*
Software Development Engineer *(June 2018 - February 2020)*

Key Courses

- Deep Learning, Machine Learning Algorithms, Introduction to ML, Computational Robotics, Learning & Reasoning with Bayesian Networks, Cognitive AI, Foundations of Intelligent Agents, Digital Image Processing

Skills

- Software Languages: C++, C, Python, Java, Go, MATLAB
- Frameworks: PyTorch, OpenCV, scikit-learn