Sri Anumakonda

Website | Email | Linkedin | Github | Twitter | Medium

Projects

VARS: A Vision-Based Approach to Robotic Self-Driving Cars Jul. 2022 – Present

- Using a DonkeyKit + hardware customization to create a robotic self-driving car capable of driving on sidewalks on a Raspberry Pi 4
- Replicating full-stack self-driving software from perception → trajectory generation and control, actively learning about deploying PyTorch models onto the Pi
- Using OpenCV to take in images of sidewalk lanes and applying Gaussian Blur + Canny Edge Detection to output lane lines (non-Deep Learning approach
- Implementing ORB-SLAM3 for Simultaneous Mapping and Localization (SLAM) as the car navigates its way through the world (sidewalks)

End2End Learning for Lateral Control | Github Nov. 2021 – Jan. 2022

- Implemented NVIDIA's End2End Learning Paper from scratch to create a network for lateral control of autonomous vehicles
- Researched various types of mechanisms and prototyped with several types of networks such as attention networks, interpetable end2end, and lateral control with MPC
- Broke down end2end approaches of companies such as Wayve and comma.ai and created POCs to understand what needs to be true to create fully end2end systems

DataGAN: Leveraging Synthetic Data for Self-Driving Vehicles | Github Medium Sept. 2021 – Nov. 2021

- Developed a Minecraft server plugin to entertain kids during free time for a previous job
- Published plugin to websites gaining 2K+ downloads and an average 4.5/5-star review
- Implemented continuous delivery using TravisCI to build the plugin upon new a release
- Collaborated with Minecraft server administrators to suggest features and get feedback about the plugin

Become a Self-Driving Car Engineer | Term 1 Term 2 Capstone Project Certificate Mar. 2021 – May. 2021

- Became one of the youngest certified self-driving car engineers in the world, after going through Udacity's nanodegree from start to finish in 12 weeks
- Learned everything there is to know about self-driving, from sensor fusion and localization to trajectory controlling and execution using PID controls
- Was featured on Udacity's YouTube channel and had an article written about me by both Udacity and David Silver for the work that I'm doing
- Written 5+ articles on my medium spanning across the parts of AV software + the technicals behind it

Experience

Associate Member June 2022 – Present

Masason Foundation *Austin, TX*

- Founded by Masayoshi Son, the Masason Foundation is a program that helps young individuals to develop skilsets to create the world of tomorrow, and contribute to the futuer of humankind
- I'm one of the 34 members selected of the 2022 cohort (Gen 6), currently am pursuing self-driving and AI research there

Alumni Sept. 2020 – June 2022

The Knowledge Society *Toronto, ON*

- Underwent human accelerator training for 2 years, where I learned about mindsets and philosophy and gained the skillsets to solve some of the world's biggest problems
- Worked with Shell, the UN and Instacart on reducing carbon emissions by 50%, creating post-secondary pathways for women in South Africa, and creating systems to incentivize shoppers and employees respectively.
- Built 20+ AI projects in the space of 12 months, ranging from Mask Detection to Skin Cancer Detection
- Full portfolio can be viewed here

Education

Westwood High School — Austin, TX
G/T Program with APs — *Aug. 2022 – May 2024*

The Woodlands School — Mississauga, ON
Enhanced Learning Program — *Sept. 2020 – June 2022*

Technical Skills

Interests: Autonomous Vehicles, Computer Vision, Artifical Intelligence, Deep Learning, Trajectory Generation, Localization, Hardware
Languages: Python, C++, Java, HTML/CSS, JavaScript, Git
Frameworks: PyTorch, Tensorflow, Keras, OpenCV, NumPy, scikitLearn, Matplotlib, AWS

References

Shreyas Kosuik - Incoming Assistant Prof at Georgia Tech's George W. Woodruff School of Mechanical Engineering

Daniel Rothenberg - Staff SWE / Technical Lead, Atmospheric Science, Waymo