

Education

University of Southern California, Viterbi School of Engineering Los Angeles, CA

- BS: Electrical and Computer Engineering *August 2017 - May 2021*
- GPA: 3.93/4.00 Major GPA: 3.98/4.00
- ECE Focus: Signals and Systems

University of California, Los Angeles (UCLA) Los Angeles, CA

- PhD: Electrical and Computer Engineering *Start in September 2021*
- ECE Focus: Computer Vision

Professional Experience

USC Undergraduate Researcher in S2L2 Lab (Professor Rahul Jain) *June 2019 - May 2021*

- Research on imitation learning of autonomous agents
 - Current work on Model Based Imitation Learning with function approximation for inducing transition distributions and learning policies from expert Markov Chains
 - Coded and analyzed a high dimensional image-based implementation of SQIL algorithm in the OpenAI Gym environment using DQNs and CNNs
 - Developed a Python toolbox with a graduate student for comparing and implementing Inverse Reinforcement Learning algorithms on small scale MDPs
- Supported and funded by NSF REU, USC Provost Research and Rose Hills Fellowship

NASA JPL Software and DSP Intern (Thomas Meehan) *July 2020 - May 2021*

- Developing C++ software for Trig receivers for enabling tracking of the European Galileo GPS constellation. The target mission is Cosmic-2 to allow for more Radio Occultations coming from Galileo satellites
 - Acquired Galileo signals for tracking via 2D doppler frequency shift search
 - Decoded Galileo data bits and created predicts from Ephemeris and Almanacs

USC Undergraduate Researcher in GSP Lab (Professor Antonio Ortega) *August 2018 - May 2019*

- Learned about Graph Signal Processing and analyzed properties of graphs with Matlab
 - Supported and funded by USC Undergraduate Research Associates Program
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Teaching Experience

USC Undergraduate Teacher Assistant:

- EE141 Linear Algebra *Fall 2018, Fall 2019*
 - Held office hours to help students with concepts and coding
- EE105 Intro to EE *Fall 2018*
 - Assisted with labs, grading, and holding office hours

Math Tutor at Mathnasium (tutoring company)

Part-time June 2018 – December 2018

Skills and Interests

Programming: C++ and Python

Relevant Software: Tensorflow/PyTorch, Matlab, Git, Linux, ROS

Github Link: <https://github.com/asvilesov>

Other Skills: CAD (Inventor), 3D Printing

Languages: Russian (Fluent), German (Basic)

Involvement / Organizations

President & Co-Founder, USC AVL – Autonomous Vehicle Club

*August 2019 – May 2021**

- A club building a small scale autonomous robot with lidar, cameras, and GPS to aid in navigation with aims for competing in International Ground Vehicle Competition (IGVC)
- Held regular workshops / lectures for our 30-40 members to learn about various concepts in coding, robotics, and mechanical/electrical prototyping

Competitor, USC Autonomous RC Car Race Competition, “RaceOn!”

Spring 2019 – Fall 2020

Member, USC 3D4E – 3D Printing Club

Fall 2017 – Spring 2018

- Project Co-Leader in building a 3D printed drone (quadcopter)

Member, USC Swim Club

*Fall 2017 – May 2021**

- Qualified for U.S. Club Nationals in 50 free, 100 free, and 100 fly

Current* - activities halted with University restrictions due to Covid-19 as of March 2020

References

USC EE Professor Rahul Jain: rahul.jain@usc.edu

USC EE Professor Antonio Ortega: aortega@usc.edu

NASA JPL Engineer Thomas Meehan: thomas.k.meehan@jpl.nasa.gov