**Daniel Silva** (484) 264 2995 | [danielzgsilva@knights.ucf.edu](mailto:danielzgsilva@knights.ucf.edu)

danielzgsilva.github.io/portfolio github.com/danielzgsilva| linkedin.com/in/danielzgsilva98

**Education**

**University of Central Florida Orlando, FL**

*Master of Science in Computer Science Expected May 2021*

* GPA: 4.00/4.00; Arthur & Sally Hillman Graduate Fellowship

*Bachelor of Science in Computer Science Completed May 2020*

* Major GPA: 3.96/4.00; Cumulative GPA: 3.90/4.00
* Honors: Magna Cum Laude, Presidents Honor Roll, Pegasus Gold Scholarship and Bright Futures Scholarship

**Experience**

**MIT Lincoln Laboratory Lexington, MA**

*Robotics Software Intern | Control and Autonomous Systems Group August 2020 – Present*

* Building a multi-agent flight controller for an unmanned aerial vehicle (UAV) swarm operating in indoor settings
* Focused on path planning, control, and vision-based obstacle avoidance to enable swift cooperative maneuvers
* Using a C++, ROS, and PX4 software stack, as well as an Optitrack motion capture system for localization

**NSF Research Experience for Undergraduates (REU) Orlando, FL**

*Undergraduate Researcher | Center for Research in Computer Vision May 2020 – August 2020*

* Developed a novel self-supervised contrastive learning framework (CL-MOT) for multi-object tracking under the supervision of Dr. Mubarak Shah and Dr. Leulseged Alemu
* CL-MOT recovers the performance of supervised trackers while requiring a fraction of the annotation labor

**National Aeronautics and Space Administration (NASA) Orlando, FL**

*Robotics Software Intern | Swamp Works R&D Team September 2019 – May 2020*

* Collaborated with Swamp Works engineers to create the EZ-RASSOR, an autonomous regolith mining rover
* Designed and implemented a swarm control system into the EZ-RASSOR’s [open source](https://github.com/FlaSpaceInst/EZ-RASSOR) ROS architecture
* Led the research effort in multi-agent path planning (Local Repair, Cooperative A\*), scheduling, and control

**University of Central Florida Orlando, FL**

*Undergraduate Researcher | Center for Research in Computer Vision August 2019 – January 2020*

* Worked on the Army Research Lab’s Unmanned Ground Combat Vehicle project alongside Dr. Mubarak Shah
* Extended an unsupervised monocular depth and ego-motion estimation algorithm to function with the vehicle’s long-range infrared (LWIR) cameras, implemented and trained in PyTorch

**Avanade New York, NY**

*Artificial Intelligence Intern May 2019 – July 2019*

* Built and deployed a text and voice-enabled chat-bot using Microsoft's Bot Framework for C# .NET
* Created NLP pipeline by leveraging Microsoft's Language Understanding service (LUIS) and used several RESTful APIs to integrate the bot with a client's CRM system, Power BI analytics, and Outlook

**Lockheed Martin Orlando, FL**

*Data Analytics Intern May 2017 – May 2019*

* Full-stack development of production-critical dashboards using Python, SQL, Tableau, and SAP HANA
* Automated manual report creation and data entry tasks using custom VBA macros

**Projects & Leadership**

**AI@UCF**

* Fostering a hotspot for computational intelligence researchers and engineers at the University of Central Florida
* Organize and lead workshops on topics such as computer vision, reinforcement learning, and neural networks

**DeepFace**

* Web application built using Flask and PyTorch to predict the age, race, and gender of all individuals in an image
* Achieved an average 83% accuracy with a Squeeze and Excitation network trained on VGGFace2 and UTKFace

**Coursework & Skills**

**Relevant Coursework**: Artificial Intelligence, Computer Vision, Machine Learning, Robotics, Projective Geometry, Linear Algebra, Multivariate Calculus, Data Structures & Algorithms, Statistics, Discrete Mathematics, Computer Architecture

**Skills**: Proficient in Python, PyTorch, ROS, OpenCV, NumPy, Git, Linux, Tableau; Familiar with C++, SQL, C#, Keras, Flask, Scikit-learn, MS Excel, VBA, SolidWorks