

# DANIEL SILVA

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## EDUCATION

### University of Central Florida

Orlando, FL

*Master of Science in Computer Science*

*Expected June 2021*

- Focus in Machine Learning, Computer Vision and Robotics

*Bachelor of Science in Computer Science | Minor in Statistics*

*Expected June 2020*

- Major GPA: 3.96 / 4.00; Cumulative GPA: 3.92 / 4.00
- Relevant Coursework: Artificial Intelligence, Computer Vision, Data Structures & Algorithms, Computer Architecture, Systems Software, Statistical Methods, Linear Algebra, Multivariate Calculus, Discrete Mathematics

## PROFESSIONAL EXPERIENCE

### National Aeronautics and Space Administration (NASA)

Orlando, FL

*Software Engineering & Robotics | Senior Capstone Project*

*September 2019 – Current*

- Working in collaboration with Kennedy Space Center's Swamp Works team and the Florida Space Institute (FSI) to develop the EZ-RASSOR, a modular version of NASA's autonomous regolith mining robot ([RASSOR](#))
- Implementing an ROS navigation stack to the [open-sourced](#) EZ-RASSOR system to improve autonomous functionality
- Using reinforcement learning to train a task management and routing system for a swarm of EZ-RASSOR rovers

### University of Central Florida

Orlando, FL

*Undergraduate Researcher | Center for Research in Computer Vision*

*August 2019 - Current*

- Researching deep learning for simultaneous localization and mapping (SLAM) to enhance autonomous navigation of ground combat vehicles under the supervision of Dr. Mubarak Shah, sponsored by the Army Research Lab
- Focus in depth and ego-motion estimation of monocular long-range infrared video streams using unsupervised training methods for convolutional neural networks

### Avanade

New York, NY

*Artificial Intelligence Intern | Received full-time offer*

*May 2019 - July 2019*

- Developed a text and voice-enabled chatbot using Microsoft's Bot Framework for C# .NET
- Incorporated Microsoft's Language Understanding service (LUIS) to grant the agent conversational intelligence
- Utilized several RESTful APIs to integrate the bot with a client's CRM system, as well as services such as PowerBI, Azure Maps and Outlook

### Lockheed Martin

Orlando, FL

*Data Analytics Intern | College Work Experience Program*

*May 2017 - May 2019*

- Built and maintained Tableau dashboards to enable informed decision making, track production metrics and visualize manufacturing defect data
- Queried and manipulated data from SQL Server and SAP HANA back-end databases
- Wrote custom macros in VBA to automate tedious manual reporting and data entry tasks
- Constructed and maintained Excel reports for Quality Engineering and Manufacturing teams

## PROJECTS & LEADERSHIP

### AI@UCF | Artificial Intelligence and Data Science Club

Orlando, FL

*Coordinator*

*December 2018 - Current*

- [AI@UCF](#) is forging a path to transform UCF into a hotspot for researchers and engineers who are passionate about AI and Data Science
- Responsible for organizing and leading workshops on topics such as computer vision, neural networks and data analytics

### Facial Classification Project

Orlando, FL

*Developer*

*June 2019 - July 2019*

- Created a 2-stage computer vision [web application](#) which predicts the age, race and gender of all individuals in an image
- Achieved an average 85% accuracy using a Squeeze and Excitation Network, trained on VGGFace2 and UTKFace in PyTorch
- Back-end development done in Python (Flask) with front-end styling being accomplished using Bootstrap 4

## SKILLS & INTERESTS

- Languages: Proficient in Python, SQL, C; previously used C#, Java, VBA
- Frameworks & Technologies: Experienced with PyTorch, NumPy, Pandas, ROS, Flask, Tableau, Git, Linux and MS Excel; Familiar with Keras, Scikit-learn, OpenCV, SolidWorks

## HONORS & AWARDS

- Received Presidents Honor Roll (4x) and Deans List (2x) awards for undergraduate academic performance
- University of Central Florida's Pegasus Gold Scholarship and Bright Futures Academic Scholarship – combined \$28,000