# EDUCATION

Bachelor of Science, Electrical Engineering December 2014

Minor in Physics, concentration in Japanese Language

University of Florida, Gainesville, FL

GPA: 3.96/4.0

**ACADEMIA**

**Computer Vision Programmer**, Machine Intelligence Laboratory August 2014 – Present  
University of Florida, Gainesville, FL

* + Designed and implemented SLAM algorithms through visual and odometer sensor fusion to assist a mobile robot navigate a course for the IEEE Autonomous Robot competition
  + Produced an undergraduate thesis on computer vision, Kalman filtering, and perspective geometry

**Optics in the City of Light REU Researcher**, Biophotonics Group June 2013 – July 2013  
Institut d’Optique, Palaiseau, France

* + Constructed 3-dimension Full-Field Optical Coherence Tomography setup to support a cell-level study
  + Characterized spherical aberration and image quality degradation as a function of conjugation position by programming LabVIEW control system and Matlab data-processing script

**NanoJapan REU Researcher**, Ajayan Lab June 2012 – July 2012  
Rice University, Houston, TX

* + Enhanced batteries and supercapacitors by creating new nanostructures and graphene coating using chemical vapor deposition
  + Grew and transferred graphene samples for international collaboration projects on graphene devices

**REU Researcher**, Materials Research Institute June 2011 – July 2011  
Pennsylvania State University, State College, PA

* + Designed and fabricated tunable microchip coils, using CST Microwave Studio to assess model feasibility and a Vector Network Analyzers for hardware testing
  + Scanned small-scale phantoms using an MRI machine and newly-designed 600MHz microchips to improve tools available to biologists and antenna designers, with results published in yearly journal

**INDUSTRY**

**Avionics Hardware Development and Integration Intern,** SpaceX August 2012 – August 2014

Hawthorne, CA

* + Developed Altium extensions in C# with unsupervised learning algorithms for streamlining design
  + Worked on thermal imaging systems on Falcon 9 Reusable to improve reliability and reduce cost
  + Designed harnesses and data acquisition circuit boards for flight on Falcon 9 Reusable and Dragon
  + Developed and qualified proprietary avionics systems to improve safety and reliability of all future Falcon 9 and Falcon Heavy flights, using Matlab, C++, Python, and Bash

**Sponsored Engineer**, Integrated Product and Process Design Program August 2013 – May 2014

Stryker Sustainability Solutions at University of Florida, Gainesville, FL

* + Lead and worked with in a multidisciplinary team of engineers
  + Designed, manufactured, and tested a C-based embedded system and fixture to rapidly test the integrity of the circuitry inside a particular ultrasonic scalpel surgery tool

**LEADERSHIP**

**Founder**, “Five for Tanzania” Charity Fundraiser for Rhotia Valley, Tanzania September 2010 - Present

University of Florida

* + Raised donations and support for the Rhotia Valley children’s home and tsunami victims in Japan from the publicity of setting multiple Guinness World Records in the sport of “joggling”

**PUBLICATIONS**

* **Feldman M**, Lanagan M, Perini S. MRI microcoils for imaging individual cells. *Annual Research Journal Electrical Engineering Research Experience for Undergrads*. IX:169-179, 2011 August
* Legel L, **Feldman M**. Smart grid deployment plans for Florida’s utilities. 10 Ideas for Energy & Environment. 14-15, 2011 July
* **Feldman M**, Gullapalli H, Reddy LM, Vajtai R, Ajayan PM. Fluorine-etched nanostructures for energy storage applications. *RQI Symposium*. Rice University, 2012 August 3.