

# Aneri Muni

amuni3.github.io | amuni3@gatech.edu | F1 Student Visa |  
704.264.7509 | 330259 Georgia Tech Station, Atlanta, GA 30332

## EDUCATION

### GEORGIA INSTITUTE OF TECHNOLOGY

BS IN ELECTRICAL ENGINEERING  
MINOR IN ROBOTICS  
May 2018 | Atlanta, GA  
Dean's List

STUDY ABROAD: GEORGIA TECH  
Summer 2014 | Lorraine, France

## LINKS

Github:// amuni3  
LinkedIn:// aneri-muni

## COURSEWORK

### UNDERGRADUATE

Intro to Automation and Robotics  
Feedback Control  
Control System Design  
Signals and Systems  
Electromagnetism  
Electrical Energy Systems  
Microelectronic Circuits  
Computer Communication  
Data Structures and Algorithms  
Digital Signal Processing  
Circuit Analyses

## SKILLS

### TECHNICAL

Java • Matlab • C++ •  
CSS • HTML • Assembly •  
VHDL • RobotC

ROS • Linux • PCL •  
MoveIt! • OpenCV • MySQL

### Softwares:

Quartus II • MathCAD •  
Multisim • LabVIEW •  
LTSpice • AutoDesk Inventor •  
Eagle • MS Office

### LEADERSHIP

- Undergraduate Research Ambassador
- Women in ECE (WECE)
- Newsletter Chair | Publicity co-chair
- ECE Ambassador

## EXPERIENCE

### AUTONOMOUS SYSTEMS LAB | VISITING STUDENT RESEARCHER

June 2017 – August 2017 | ETH Zurich

- Programmed ABB's YuMi robot to rebuild a block stack after scanning it.
- Developed pick-place pipeline using MoveIt! and object-detection pipeline using PCL and ASUS PrimeSense sensor.

### GEORGIA TECH RESEARCH INSTITUTE | ROBOTICS AND IMAGE PROCESSING CO-OP

August 2015 - December 2015 | Georgia Tech

- Programmed agricultural robot to maneuver autonomously in poultry houses.
- Implemented path finding and obstacle avoidance algorithms using Kinect data.

May 2016 - August 2016 | Georgia Tech

- Developed user friendly Windows GUIs in C++ to run a pedestrian tracking software, process the data and access results using MySQL.

### SCHOOL OF MATHEMATICS | TEACHING ASSISTANT

January 2016 – May 2016 | Georgia Tech

- Taught **Differential Equations** a class of 30 students by holding recitations.

### CENTER FOR ACADEMIC SUCCESS | PEER TUTOR

August 2014 – May 2015 | Georgia Tech

- Taught **Differential Equations** to class of 50 students by holding study sessions.

## RESEARCH PROJECTS

### DYNAMIC SCENE RECONSTRUCTION

Jan 2017 – Present | Georgia Tech Research Institute

- 3D tracking and reconstruction of dynamic, non-rigid scenes.

### QUADRUPED ROBOT

August 2016 – December 2016 | IVALab, Georgia Tech

- Programmed a quadruped robot that emulates the walking gait of quadrupeds.
- Designed 3D model of quadruped with an actuated spine in AutoDesk Inventor.

### AUTONOMOUS BLIMPS

May 2015 – December 2016 | Georgia Tech Systems Lab

- Performed system identification and developed PID controllers to control 3D motion of a robotic helium blimp.
- **Nano Blimp** – developed a smaller version of blimp to create a sensor network.

## AWARDS

2018, 2016, 2015	President's Undergraduate Research Award
2017	ThinkSwiss Research Scholarship
2017	James G. Wohlford Scholarship
2015	IEEE Control System Society Video Contest, 3rd position

## PUBLICATIONS

[1] C. T Usher, W. D Daley, B. P Joffe and A. Muni. Robotics for Poultry House Management. **ASABE Annual International Meeting**, 2017.

[2] S. Cho, V. Mishra, Q. Tao, P. Varnell, M. King-Smith, A. Muni, W. Smallwood and F. Zhang. Autopilot Design for a Class of Miniature Autonomous Blimps. **Conference on Control Technology and Applications**, in press.