Anjali Padmanaban

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Enthusiastic engineering graduate seeking challenging opportunities in electronic design and automation.

EDUCATION

University of Central Florida
BS in Electrical Engineering
Mathematics Minor
Art Studio Minor
May 2022 | Orlando, FL
Cum. GPA: 3.36

COURSEWORK

Ordinary Differential Equations II
Matrix and Linear Algebra
Linear Control Systems
Analog Filter Design
Satellite Communications
Introduction to Robotic Systems
Embedded Systems
Computer Architecture

SKILLS

MATLAB • Multisim • EAGLE • AutoCAD
Python • Java • C, Assembly Language
Next.js • LaTeX• OpenCV • NumPy
Code Composer Studio • Arduino • MARS • Vivado
Components: Arduino, Raspberry Pi, MSP430 microcontrollers, LoRa REYAX Module, TPS61178 Boost Converter, AKK TS832+RC832, LF351D OpAmp, ARTIX-7FPGA
Lab testing equipment: Multimeter, Oscilloscope, Power Supplies
Microsoft Office: Word, Excel, PowerPoint
Satellite Communications: Uplink, Downlink Calculations

ACHIEVEMENTS

2022 Selected for FAR-51025 Launch Contest & Senior Design Showcase Semi Finalist
2021 Dean's List
2019 Tableaux Vivant Exhibit
2017 Dean's List
2015 32nd/64 in FIRST Robotics Competition
2014 FLL: State 1st in Robot Game 1st in Robot Design

PRESENTATIONS

Real Time Finger Detection
Rover Payload Final Presentation
Rover Payload Final Demo

EXPERIENCE

Capacitech Energy | Electrical Engineering Intern
August 2021 - December 2021 | Orlando, FL

- Created MATLAB simulations to test the effects of supercapacitors in parallel with solar panels in small scale and large 100kW powered grid.
- Wrote captivating articles highlighting the company's innovation in creating flexible supercapacitors.

University of Central Florida | Undergraduate Research Assistant
January 2019 - May 2019 | Orlando, FL

- Collaborated with a mentor to develop a research question related to multi robot systems.
- Independently researched methods of mapping and navigation.
- Utilized MATLAB to create a mathematical model to demonstrate how a multi robot system works to cover as much area as possible.

FIRST | Participant & Coach
Jan 2013 - May 2017 | Jacksonville, FL

- Actively participated in FIRST competitions as Team Captain for FIRST Lego League (FLL), FIRST Robotics Competition (FRC), FIRST Tech Challenge (FTC) and coached FLL teams.
- Designed, built, and programmed robots to compete in the FIRST competitions and won several awards.

Kumon Math and Reading Center | Tutor
July 2013 - June 2020 | Jacksonville, FL

- Instructed students ages 4-18 in math and reading.
- Focused on guiding student in higher level math like trigonometry and calulus.
- Assisted students in developing critical reading skills.

PROJECTS

Aerojet Rocketdyne Radio Controlled Rover | Spring 2022
Developed a radio controlled rover payload that was chosen out of 6 competing designs for entry into the FAR-51025 Rocket Launch Contest. The custom built rover and capsule meet strict requirements of weight, size, and durability set by the rocket team to be deployed at 10,000 ft, and is controllable over 2km with live video feedback. Managed complete development life cycle from component selection, schematic capture, PCB design, firmware development and field testing of a modular 3 part system consisting of a capsule with an automated landing system, radio controlled rover, and control station with video monitoring.

Transistor Amplifier | Fall 2020
Designed a three-stage amplifier to meet design specifications using Multisim and Excel.

Real Time Finger Detection | Fall 2020
Made with OpenCV Python, this program will count the number of fingers displayed within the camera frame.

IEEE Southeastcon 2020 | Fall 2019 - Spring 2020
Collaborated with a group of engineering students to build a robot to compete in SOUTHEASTCON 2020 where the robot must retrieve and stack color coded blocks in the order of pi.

Mazebot | Fall 2017
Built using the mBot and programmed with mBlock, this robot can navigate any maze by utilizing ultrasonic sensors and a light sensor.