Landan Seguin

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SUMMARY

Electrical Engineer specialized in developing and testing embedded control systems. Currently building an AUV for ocean research and expanding the degrees of freedom of a UAV using additional hardware and PID controllers. I am interested in working on embedded control systems in vehicles and robots.

EDUCATION

GEORGIA INSTITUTE OF TECHNOLOGY, Atlanta, GA Fall 2015 – Spring 2019

- Candidate for Bachelor of Science in Electrical Engineering
- Candidate for Minors in Aerospace and Physics
- Cumulative GPA: 3.73/4.00
- Relevant coursework: Digital Design, Digital Signal Processing, Circuit Analysis, Object-Orientated Programming

EXPERIENCE & PROJECTS

Research Assistant at Georgia Tech Systems Research Summer 2016 – Present

- Increasing UAV movement by designing PID controllers using MATLAB Control System Toolboxes
- Developing AUV internal and external communication using I^2C and RF communication
- Designed a mounting rack in SolidWorks to hold the electronics in an AUV
- Leading weekly meetings for the software subsystem

Idea to Prototype: Electrohydrodynamic Thruster, Team Leader Spring 2016 – Present

- Researching the effects of electrical and geometrical variables on a low-altitude electric propulsion system
- Electrostatic simulation conducted using COMSOL
- Manufactured a testing apparatus using 3D printing and water jetting
- Currently collecting data, analyzing and planning future goals

Georgia Tech Solar Racing, Power Systems Team Member Fall 2015

- Designed a buck-boost converter for a maximum power point tracker system
- Designed a voltage and current regulated battery charger using an Arduino

42nd IEEE High School Photovoltaic Competition: Autonomous Garden, Team Leader Spring 2015

- Designed and built an Arduino control system that regulated watering and battery recharging using sensor data
- Analyzed power consumption by collecting data from a light sensor, a voltage sensor and a current sensor

Intel ISEF Project: Electrohydrodynamic Thruster, Team Leader Fall 2014 – Spring 2015

- Designed and built an asymmetrical capacitor and HVDC power supply for a low altitude electric propulsion system
- Tested the effects of five variables on the system, analyzed data, and drew conclusions from trends

Tesla Coil Project Spring 2014

- Designed and built two resonate transformers using four LC circuits, two LC circuits for each transformer
- Built a rectifier for AC-DC conversion so that the output voltage could be applied to an ionocraft

AWARDS

- Sidney Goldin Scholarship
- First place in Electrical and Mechanical Engineering at Intel ISEF Louisiana
- First place at 42nd IEEE Photovoltaic High School Competition

SKILLS/INTERESTS

Programming: MATLAB, C++, Arduino C/C++
Communication: Poster Board Presentation, Research Paper, Speech and Debate, Customer Service, Tutoring
Manufacturing: 3D printing, waterjet
Programs: SolidWorks, Microsoft Office, Comsol