

# Nicolas Montoya

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## Objective

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Obtain a B.S. in Electrical Engineering and M.S. in Computer Engineering at UF and develop Innovative technologies

## Education

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### **University of Florida - Electrical Engineering & Computer Engineering** *2018 - Present*

- Performing Undergraduate Research designing a Bioreactor device
- Electrical Systems Lead for ASME SDC Robotics

### **Miami Dade College (MDC) Honors College - Electrical Engineering - 3.89 GPA** *2016 - 18*

- Selected as the *2017-2018 Outstanding Student in Physics at the Kendall Campus* (MDC Award)
- President of the IEEE (Institute of Electrical and Electronics Engineers) club
- Vice President of Florida Engineering Society
- Built and programmed robot from scratch for SoutheastCon 2018 (IEEE Hardware Competition)
- Performed Spring research in Photonic Metallic Band Gap Prisms
- Performed Summer research designing two solar panel systems
- Won 1st place in *Idea Center's IoT (Internet of Things) Contest*
- Won 2nd place in ACM-ICPC Programming Competition (Southeastern Regionals Division 2)
- Voluntarily tutored over 100 students in Physics, Chemistry, and Programming

### **South Miami Senior High School - 4.5 GPA - Summa Cum Laude** *2012 - 16*

- 2nd place in Mini-Urban Challenge (robotics competition)
- President of Engineering Society and Science Honors Society

### **Certificates (software)** *2014 - 17*

- AutoCAD 2D & 3D, SQL Database Programming (MySQL), Python, C++

## Skills

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### **Public Speaking**

- Won Best Technical Presentation at Mini-Urban Challenge two years in a row
- Hosted Arduino Workshops and presented poster board for solar panel research

### **Proficient in Advanced Technologies**

- Linux, Python, C, C++, Eagle, AutoCAD, Fusion 360, Raspberry Pi, Arduino, Parallax Propeller

### **Effective Communication**

- Can prepare well defined Design Documents with illustrations and explanations
- Can articulate ideas in a simple-to-understand manner

### **Democratic Leader**

- Led multiple research team and clubs while allowing members to share ideas
- Encouraged numerous team members to contribute towards successful project outcomes

### **Effective R&D Engineer**

- Created multiple working prototypes for startup company within weeks
- Can quickly become familiarized with new programs and technology

## Professional Experience

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**Sandia National Laboratories Internship (R&D Counter - Robotics)** 08/04/2018 - Present

- Developing automated control software for embedded devices
- Learning ROS for Advanced Robotics Simulations
- Developed real-time image recognition and tracking using Raspberry Pi and Python

**Research and Development Engineer for Luxerel Corp. (Unpaid Internship)** 2016 - Present

- Develop innovative products for large-scale IoT deployment
- Program and troubleshoot various embedded devices and micro-controllers
- Design production quality PCB's

**Utility pole surveyor for AT&T (contractor)** 2015

- Used surveying instruments to take various measurements of utility poles
- Used Ocalc to simulate utility poles' structural integrity with proposed fiber optic cable(s)

**AutoCAD Draftsman for Architects, Engineers and General Contractors** 2014 -16

- Worked for Douglas Wood Inc. (Structural Engineering Firm)
- Created official Construction Documents for Architects and Engineers
- Created renovations for General Contractors (Freelance work)

## References

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- Diane S. Callow (*Mentor for Sandia National Labs internship*) **Available upon request**
- Dr. Steven Spencer (*Mentor for Sandia National Labs internship*) **Available upon request**
- Jon Salton (*Hiring Manager at Sandia National Labs*) **Available upon request**
- Dr. Roberto J. Siegert, Eng. Ph.D. (*CTO of Luxerel, Corp.internship*) **Available upon request**
- Ph.D Student Bryan D. James, BAsC. (*mentor for UF Bioreactor research*) **Available upon request**
- James Poe (*MDC IEEE Advisor*) **305 - 237 - 2174**
- Jefferson Miller (*MDC Engineering Department Leader*) **305 - 237 - 0962**
- David Freer (*MDC Programming Competition Instructor*) **305 - 237 - 2555**
- Soumia Souchak, Ph.D. (*MDC professor for spring research*) **305 - 237 - 2763**
- Cristian Penciu, Ph.D. (*MDC professor for summer research*) **305 - 237 - 2637**