

# Daniel E. Puleio

19 Ensign Drive | Massapequa | NY 11758  
516.359.9764 | depuleio@buffalo.edu

## EDUCATION

---

### University at Buffalo, The State University of New York

*Bachelor of Science*, Computer Engineering, May 2018

G.P.A. – 3.1/4.0, Dean's List – Fall 2015

## PROFESSIONAL EXPERIENCE

---

### *Software Engineering Intern, NASA's Goddard Space Flight Center – Summer 2017*

- Built a client server application in C++ for NASA's Radar Control Center which was engineered to listen and receive encoded radar packets on the network using asynchronous UDP sockets.
- Implemented methods of decoding raw radar packets and checking for the quality of each packet. Supplied a graphical user interface to show NASA's operators which radar was sending grade tracking data.
- Server GUI also gave operators the ability to broadcast desired radar packets on the control center's network via UDP datagrams.
- Added layer of AES 256 encryption to broadcasted UDP packets for security requirements.
- Built client GUI application to receive and decrypt the broadcasted radar packets filtered by operator, given the user entered the correct password and is connected to the Radar Control Center's subnet.

### *Software Engineering Intern, Telephonics Corp. – Summer 2017*

- Updated outdated GUI software to a .NET application to run on Windows 7. GUI would control an application that communicated to 20 hand-held devices over RS-232 and USB. This was a summer long project.
- Added features to the application, giving Telephonics' technicians the ability to use a bar scanner to report serial ID's of each hand-held device.
- Replaced Advantech's USB Driver with Microsoft's WinUSB Driver. Rewrote the code with WinUSB's API.

## LEADERSHIP EXPERIENCE

---

### *Mission Control Lead, University at Buffalo Nano-Satellite Laboratory Spring 2015 – Present*

- Enhanced the ability for our clients to communicate with our program's satellite via a web server.
- As lead of the subsystem, I hold weekly meetings, assign tasks, offer help to students with implementing code and I manage our private Github repository.
- Designed and developed four modules: flight software, radio server, mission control's server, and client software.
- Built the front end of the mission control webpage using HTML/CSS and JavaScript.
- Implemented JQuery AJAX functions to transmit data using GET and POST requests from client software to Mission Control Server via URL routes.
- URL routes defined within the views layer of Mission Control using Flask annotations.
- Mission Control's models layer built using Python, Redis and MongoDB to handle communication with Radio Server for sending uplinks and receiving downlinks.
- MCS and Radio server both store valuable information within MongoDB, a large third-party database.

## SKILLS

---

- OS Platforms: Linux including Ubuntu and Redhat, Windows, OS X
- High Level Languages: C++, Python, Java, C#, Objective C, C, JavaScript
- Low Level Languages: ARM and MIPS architectures
- Hardware Descriptive Languages: VHDL, Verilog
- Markup Languages: HTML, CSS and XML
- Frameworks: Flask, Django, QT, Linux LUI environment, Linux/Unix Terminal, Redis
- IDEs: Android Studios App Development, Visual Studio, Eclipse, PyCharm, Atom, QT Creator
- Useful APIs: JSON, AJAX, Restful API
- Foreign Languages: Fluent in Spanish