José Alejandro Duque

A: 6 Arthur Street, Binghamton, NY 13905
P: (845) 803-6402| E: jaduke16@gmail.com | Website: joseduque.io

Education:

Binghamton University, State University of New York, Watson School of Engineering

Masters of Science in Electrical and Computer Engineering — May 2016
Bachelor of Science in Computer Engineering — May 2015
Masters GPA: 3.6/4.0 | Bachelors GPA: 3.4/4.0 — Eta Kappa Nu Engineering Honor Society | Chi Alpha Epsilon Honor Society

Skills:

Languages: JavaScript, Java, Python | **Other:** AWS Elastic Beanstalk, AWS Amplify, AWS S3
Frontend: React, Redux, Bootstrap, HTML, CSS | **Backend:** Node/Express, MongoDB, SQL, REST, JSON, XML

Professional Experience:

Software Engineer II at **BAE Systems** — **October 2016 – Sept 2020**

- Lead multi-functional commercial and government/military proposals consisting of engineers, managers, cost estimators, contracts, and operations personnel as part of the Engineering New Business team. Responsible for proposal schedule generation and management, management of technical proposal and management volumes, finding resource staffing with management and providing leadership to the bid team
- Developed frontend/backend APIs for the BAE Systems proprietary Interface Control Document (ICD) tools for automated code generation and test verification using Javascript/ SQL Server/ NodeJs/ HTML5 and CSS.
- Developed Python tools for Interface Control Document(ICD) data manipulation and for automated code generation using SQL Server, pyodbc, and several other python data processing libraries such as pdfminer, ElementTree, and pandas.
- Developed Interface Control Document (ICD) data processing tools for the Common Data Network on the Boeing 777x. Tools developed using Python and SQL queries.
- Integration/Verification lead for the Circuit Breaker Interface Control (CBIC) application for the Boeing 777x Flight Control Module. Job included developing python test vectors to verify correct operation, and hardware debugging.
- Test developer/test verification engineer for the GE9X engine control system and the On-Board Inert Gas Generation System for the KC-390 jet. Tests were developed in GTI, a BAE Systems proprietary language and run on the engine control system.

Linux Kernel Software Engineering Intern at **Intel Corporation** — **Summer 2015**

- Wrote and submitted patches for the Linux kernel and Linux UEFI Validation Project (LUV). Patches focused on reducing the size of the Linux kernel by reducing the amount of zero padding through the implementation of a smaller page alignment.
- Achieved a kernel proper size reduction of 23% using two varying approaches.

Personal Projects:

Masters Project: Covert Hardware Trojan Implantation — **December 2015 – May 2016**

- Implanted a covert hardware Trojan that is highly undetectable post-synthesis, designed and coded by me, into an existing open source VHDL microprocessor. When triggered, the Trojan was able to effectively change the outcome of branch instructions.

Just Us, Journaling App — **Summer of 2018**

- Developed the protype for a shared journaling app for Android using Java, XML, Firebase, and Agile programming. This app follows a scrapbook model and uses Firebase for authentication and to store user data.

Wireless Home Security System — **December 2015 – May 2016**

- Designed and built a wireless security system using low cost CMOS camera, Wi-Fi module, and low power transceivers. Product captures and uploads images of intruders that enter through the door of a house.

Service & Leadership Experience:

Leadership Development Program at **BAE Systems** — **April 2017 – Present**

- Participated in weekly leadership development classes focusing on leadership, project management, AGILE development, project planning/budgeting, business proposals and acquisition, and personal development.
- Program Manager for a group of 19 BAE Systems employees for a week long leadership development conference. Job included meeting with customers, program budgeting, delegation of tasks, and coordination across three separate teams.
- Developed a winning business proposal as part of a team of five engineers for an Electric Actuation System (EAS) to be developed and prototyped by the end of 2018.

Community Service Director for Society of Hispanic Professional Engineers at Binghamton — **January 2012 - May 2014**
Phelps Memory Hospital Senior Volunteer and Volunteer Trainer — **May 2008 - May 2011**