

Daniel Albuquerque

16531 121st Ave. SE, Renton WA 98058 | 240-543-4112 | DanAlbu27@gmail.com | U.S Citizen

EDUCATION

- Georgia Institute of Technology**, Atlanta, GA **May 2018**
B.S. in Electrical Engineering
Minor in Computer Science (Computing and Intelligence)
GPA: 3.73/4.0
- Montgomery College**, Rockville, MD **May 2015**
A.S. in Electrical Engineering
GPA: 4.0/4.0

WORK EXPERIENCE

- The Boeing Company**, Seattle, WA **April 2023 – Present**
Software Engineer III
Airplane Data Exchange (ADX)
- Large scale data platform to collect, store, analyze and serve near live data from airplanes globally. Integrated data with prognostics rule set to detect and notify in case of anomalies. Enables early and proactive detection of issues and failures.
 - Architected, designed and build cloud infrastructure, React web apps supported with extensive APIs to support data flows. Built and maintained complex Continuous Integration & Continuous Deployment (CI/CD) pipelines to enable a growing team of developers to work with speed and rigor in an Agile framework.
- Auto inspection*
- Designing & building imaging hardware and software framework to utilize computer vision identify and categorize flaws in decorative laminate materials during layup and production of airplane interiors
 - Designing & Building software infrastructure & hardware storage to capture high resolution images from long time frame stress tests on airframes for the US air force
- Bifrost Portal*
- Next JS front end and .NET back end to create a fully functional portal to enable non-technical users to interact with an API only aircraft system. Implemented CI/CD pipelines to support developing in an agile framework. Provided guidance and managed work for a junior software developer and an intern
- Connected cabin /Galactica*
- Working with developers in Germany to design and co-develop onboard and offboard real-time messaging system (SDK) to enable suppliers to collect data from devices (seats, equipment, etc.) in the Aircraft
 - Responsible for architecture and continuous integration and continuous deployment (CI/CD) of code
- Software Engineer II** **November 2021 – April 2023**
Connected Cargo
- Developed solutions to locate and track cargo pallets onboard the aircraft. Prototyped with cameras, bluetooth and Phase RF antennas + Numerous algorithms (Particle filters, K-means, trilateration, etc)
- Track and Trace*
- Designed and built a complete system (hardware+ software) in a high rate production environment that is poised to save ~\$1.4 million dollars this year in early scrap/defect identification
- Maven*
- Prototyped a fully searchable collection, fusion and distribution platform for aviation data, with complete user management and external app hosting ability
 - Resulted in securing \$80 million in funding

Electrical Engineer II**August 2020 – November 2021****New Mid-Market Airplane (NMA) Program data office**

- Work across all airplane systems to define, implement and maintain Data Architecture and Strategy
- Developed extensive systems level requirements to create the first ever integrated data definition view

Electrical Engineer I**August 2018 – August 2020****Aviation Internet of Things (AIoT)**

- Cross functional team developing new sensor fused technology to improve connectivity and data

ECPE (Early Career Production Experience)

- 4 month factory rotation: 787 Liaison Engineering, Everett delivery center, 787 Final Assembly

The General Electric Company (GE), Salem, VA – Software Engineering Intern**Summer 2017**

- Drove reduction in man hours needed by an order of magnitude and customer satisfaction – by writing enhancements and implementing bug fixes for a long standing industrial controller configuration tool (Mark Vie/ ToolboxST) to add compatibility for use with MATLAB Simulink models
- Created automation to help maintain local metrics and other bookkeeping operations
- Was involved in the larger software development process, agile workflow, scrum and scaled agile planning

Cisco Systems, San Jose, CA - Hardware Engineering Intern**Summer 2016**

- Designed schematics for a next generation RSP (Route Switch Processor) to be utilized in a large server setup
- Met with suppliers/vendors to problem solve and probe pre-release datasheets
- Worked with 25 interns in multiple team building exercises and competitions

Mainzer Microtron (MAMI), Mainz, Germany –Student Researcher**Summer 2015**

- Incorporated a Cherenkov detector into existing EPICS (Experimental Physics and industrial) control system using ADCs, Jee Node Micro-Controllers and a Raspberry Pi (single board computer)
- Collaborated with leading physicists and attended weekly seminars on cutting edge particle physics

Hillcrest Labs, Rockville, MD – Hardware and Software Intern**June 2014 – June 2015**

- Designed PCBs and created circuit schematics
- Operated electronics lab equipment (Oscilloscope, Function Generator, Soldering) to debug and test circuitry
- Ran ALT (Accelerated Life Testing) on MEMS sensors and generated reports for a range of customers

National Institute of Standards and Technology (NIST), Gaithersburg, MD – Guest Researcher **Summer 2014**

- Designed and wrote software monitoring the environment (Temperature, Pressure and Humidity) inside a mobile encasement for the U.S Bill of Rights
- Uploaded live data to cloud storage, set up alarms and parameter checks using an Arduino board and mobile data

PATENTS**Aircraft System Log File Automatic Processing and Alerting** *Case Reference No.: 23-1505-US-NP; Filing No.: 18/736968. Pending***TEACHING & MENTORING****EdWells Partnership Instructor, Boeing****October 2020 – Present**

Developed new curriculums and created materials for interactive classes to improve skills for employees at Boeing

- Introduction to Single Boards computing: Taught 10 + times, planned 3x per year
- Introduction to Computer Networks: Taught 5 + times, planned 2x per year
 - o Textbook: TCP/IP Network Administration: Help for Unix System Administrators 3rd Edition, Hunt
- Intermediate Computer Networks: In development, first class planned for October 2024

GEM Mentorship program

May 2021 – July 2023

- Mentored 8 mentees of various levels (entry to senior) to reach their career goals. Maintained long term mentor relationships with 3 mentees. They were each able to grow and advance a level/promotion grade in their careers during that time

Teaching Assistant, Georgia Tech

Spring 2018

- ECE 2035 (Programming hardware & software systems)

Teaching Assistant, Montgomery College

Sept 2013 – May 2014

- Assisted professor in teaching ES 100 (Introduction to Engineering Design)
- Tutored students in CREO Parametric (CAD Software), aided students with educational robot (Boe-Bot) projects

Excel Beyond the Bell

November 2012- May 2015

- Created curriculum, taught, and ran an afterschool hands-on STEM class for middle school students at public schools in Maryland. These classes iteratively built on creating a line following robot

PROJECTS

Aquarius, I2P (Idea to Prototype), Create X

August 2016 to June 2018

- Aquarium Monitoring and IoT (Internet of Things) enabled system using microcontrollers and multiple sensors
- Developed complete hardware/software platform and web app (AWS cloud)
- Completed a rigorous market analysis program involving over 80 interviews and business reviews

Micro-Mouse, IEEE Region 2 Student Activities Conference (SAC)

April 2013 & April 2014

- Used a kit one year and built from scratch the second year
- Robot had to navigate and solve a 16'x16' maze, won Second Place (April 2013)

Satellite Tracking Unit – Using two antenna rotators and stepper motors

Summer 2013

- Used inexpensive equipment to construct an azimuth and elevation rotator system for pointing antennas to track communication satellites in the Clarke belt, which assists Ham radio use

Home Control System Design Project

February 2013-April 2013

- Developed a central unit for energy conservation and house security using a single FPGA board
- Worked with a team of 4 students under the guidance of a professor

CERTIFICATES & PROFESSIONAL COURSES

Massachusetts Institute of Technology, Online certificate. CEU's: 8.5

Nov 2019

Architecture and Systems engineering: Models and Methods to Manage complex systems

Edmonds Community college, Edmonds, WA

Sept 2019 - Sept 2020

- Aviation Ground school (private pilot)
- Industrial UAV systems
- SMD soldering
- Applied composites

AWARDS AND AFFILIATIONS

- Jack Kent Cooke Scholar, On-Ramp to STEM Scholar, Multiple Physics, Engineering and Academic Excellence
- Louis D. Bliss Endowed Scholarship, \$1145
- Dean's list across all semesters of undergraduate studies
- Prizes/Awards, Member of IEEE and Phi Theta Kappa International Honors Society

SKILLS

Prog. Languages: C, C++, C#, SQL, Javascript, Java, Python, Simulink, Verilog, Arduino, EPICS, Mathcad, Lab View

Tools: Visual Studio, MongoDB, Grapy QL, SQL Manager, Cadence, CREO, SPICE, Quartus, Eagle, MATLAB

Spoken Languages: English, Hindi, Kannada, Tulu, Konkani, German (elementary), Spanish (elementary)

Leadership: EdWells Instructor, IEEE Club President, BOEALPS Mountaineering trip leader

Experience: Soldering, Oscilloscopes, Function Generators, CNC router& lathe, Composite molding (carbon fiber) and 3D printers