

# Blaine Allen

Waco, TX

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BlaineAllen.com

## EDUCATION

### **Masters of Science - Electrical and Computer Engineering** 2023

*Missouri University of Science & Technology — Rolla, Missouri — GPA: 3.5*

Coursework: Embedded systems, mechanical vibrations, statistical data analysis, additive metal manufacturing design and optimization, control systems, processor design, advanced Artificial Intelligence, data mining, financial math, etc.

### **Bachelors of Science - Electrical and Computer Engineering** 2018

*Missouri University of Science & Technology — Rolla, Missouri — GPA: 3.2*

Awarded First Place in University Engineering Competition. Developed signal processing hardware and machine learning AI for thought-controlled brain computer interface. Accomplished while also working full time in the Air Force.

### **Associates of Applied Science - Aerospace Maintenance Technology (USAF A&P Equivalency)** 2014

*Community College of the Air Force — Wichita, Kansas — GPA: 4.0*

## EXPERIENCE

### **Electrical Manager, Electrical Engineer**

*Diversified Product Development — Waco, TX*

2025 - Present

Led the construction of electronics and mechanical systems for a \$1M robotic platform truck for service in the energy generation sector. Constructed Explosion-proof Breakover Fixture electronics for Firefly Aerospace spacecraft payload fairing. Established a formal electrical shop for assembly of electronics.

### **Lead Engineer & Equipment Technician**

*South Texas Astronomical Society (NASA Partner) — Brownsville, TX*

2023 - 2025

Responsible for cost-effective troubleshooting and engineering of over \$110,000 of telescopes, observatories, embedded systems, and power systems.

### **Electrical Engineer and Computer Scientist - Department of Defense-funded**

*Missouri University of Science & Technology — Rolla, Missouri*

2018 - 2023

*Applied Computational Intelligence Laboratory - Electrical & Computer Engineering  
Mechatronics & Control Systems Laboratory - Mechanical & Aerospace Engineering*

Designed and built the first ever quantitative assessments of brain damage from a systems perspective with electrical time series analysis, fluid composition modeling, and Artificial Intelligence. Created the first of its kind mechatronic control from electrical brain activity to quadcopter flight (2018).

### **Crew Chief Aerospace Technician - Stratotanker Air Refueling Operations**

*U.S. Air Force: Staff Sergeant - Combat Veteran - Secret Security Clearance*

2010 - 2018

Performed and supervised the hands-on maintenance of all aircraft systems. Responsible for signing off on final system checkouts for crewed flights. Thrived in a fast-paced environment on over 700 missions and combat zone deployment: 100% mission success and flawless Quality Assurance record.

- Responsible for all aircraft subsystems: 3-phase high-voltage electrical, structural/mechanical, high-pressure 3000 psi hydraulics/pneumatics, avionics, satellite comms, and F-108 jet engines.
- Awarded Air Force Achievement Medal for “honorable actions taken averting \$633.6 million in catastrophic damages to the fleet of aircraft and safety of numerous flight crew”.

## SKILLS

### **Years of Experience**

**Aerospace & Automotive:** Mechanical, electrical, pneumatic hand tools and power tools 20 +

**Programming:** C/C++, Python, MATLAB, Verilog, Assembly, Neural Networks, AI tools 4 +

**CAD:** OnShape, AutoCAD, learning Revit 2 +

**Welding:** Stainless Steel MIG & TIG 2024 Certification 1 +

**Projects:** Solar and battery system development, quadcopter fabrication, cubesat satellite design and build, design of hybrid rocket NO<sub>2</sub> + HTPB, hydrogen/oxygen electrolyzer hardware.

- Proficient with mechanical and electrical technical drawings, schematics, and data reports

- Strong verbal and written interpersonal and communication skills on dynamic teams

- English, Spanish working fluency

**U.S. Citizen - Former Secret Security Clearance**