Blaine Allen

Brownsville, TX   816-377-4788   Blaine.b.allen@gmail.com   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_2 + 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

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U.S. Citizen - Former Secret Security Clearance
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