

Jon A. Tolden

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U.S. Citizen | Inactive Secret Clearance



Driven Electrical Engineering student and former U.S. Army Unmanned Aircraft Systems (UAS) Operator with hands-on experience in UAS integration, electric power systems, and high-efficiency energy architectures.

EDUCATION

California State University, Long Beach

Expected Spring 2027

Bachelor of Science, Electrical Engineering
Minor, Applied Mathematics

Cochise College – Cochise, AZ

July 2024

Associate of Applied Science, Unmanned Aerial Vehicle Flight Operations

WORK EXPERIENCE

Engineering Project Manager | American Tenet | San Antonio, TX

May 2025 – August 2025

- Directs the full RDT&E lifecycle of HAVOC-03, a long-endurance fixed-wing UAV, coordinating a 20-member multidisciplinary intern team to achieve flight-ready status and milestone delivery within 10 weeks.
- Applies Agile PM principles, Gantt tracking, and engineering reviews to manage regulatory timelines.
- Streamlines cross-functional collaboration and risk mitigation strategies, ensuring milestone delivery.

Electrical Engineer | American Tenet | San Antonio, TX

May 2025 – August 2025

- Designs custom PCBs in KiCad for UAV launchers and on-board power distribution systems.
- Develops MATLAB/Simulink models for dynamic load balancing, increasing flight endurance by 25%.
- Conducts hardware validation and troubleshooting of transceivers, power units, and sensor interfaces through the usage of oscilloscopes and programmable power supplies.

Electrical Engineer Intern | Flux Speed | Hybrid | San Antonio, TX

January 2025 – Present

- Performs high-frequency FEA simulations using Ansys Maxwell and other CEM tools to analyze and optimize magnetic flux paths, core losses, and torque ripple in axial flux electric motor designs.
- Designs and simulates high-voltage Electronic Speed Controller circuits, using KiCad for PCB layout and QSPICE for high-fidelity simulation of control and power electronics up to 400V, 400A.

UAS & Engineering Advisor | American Tenet | Remote

September 2023 – Present

- Advises on UAS integration strategies across multi-domain sectors, aligning technical capabilities with mission requirements and proposing system-level solutions for communications, power, and deployment architecture.

Ground Penetrating Radar Analyst | Penhall Technologies | Anaheim, CA

September 2022 – January 2023

- Conducted comprehensive subsurface surveys using both advanced ground-penetrating radar (GPR) and X-Ray technologies to detect utilities and geological structures.
- Analyzed complex data and generated utility maps, delivering actionable insights that reduced delays and damage, resulting in seamless execution and upwards of 20% cost savings on multi-million dollar projects.

MQ-1C Unmanned Aircraft Systems Operator | Sergeant | U.S. Army

January 2016 – January 2022

- Accumulated over 1,000 accident-free combat flight hours piloting the MQ-1C Gray Eagle UAS platform.
- Operated and analyzed Electro-Optical/Infrared sensors, Synthetic Aperture Radar, and Airborne Electronic Warfare systems, enhancing real-time data acquisition, signal processing, and target tracking.
- Selected amongst peers to perform specialized UAS roles including Pilot-in-Command, Maintenance Test Pilot, and Unit Trainer, demonstrating expertise in highly specialized and technical tasks.
- Led a 12-member team, overseeing mission logistics and mentoring personnel in systems analysis.

SKILLS & CREDENTIALS

Programming: MATLAB, Python, C/C++

Software: KiCad, LTspice, QSPICE, Simulink, AutoCAD, Ansys Maxwell, SOLIDWORKS

Equipment: Oscilloscope, Signal Generator, Digital Multimeter, Power Supply, Soldering Station, STM32, Raspberry Pi

Certifications/Licenses: AutoCAD Certified User – Autodesk (2024), FAA Part 107 Remote Pilot Certificate (2024)