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.
* Streamlins 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)