

ANDREW AZELTON

BS · NRP · FP-C · WP-C

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PROFESSIONAL PROFILE

Advanced practice paramedic and AI systems developer with a clinical background in austere and operational medicine. MSc in Austere Critical Care. Research and development focused on AI-enabled clinical decision support — architecting systems designed to operate offline, off-grid, and in resource-constrained environments where conventional infrastructure does not exist.

CORE COMPETENCIES

Clinical Background: Prehospital Critical Care · Damage Control Resuscitation & Whole Blood · Austere & Operational Medicine · Prolonged Field Care · Advanced Airway & Ventilator Management · Point-of-Care Ultrasound (POCUS) · Search & Rescue Medicine

AI & Systems Development: RAG-based CDSS Architecture · Edge LLM Deployment (Offline/Air-gapped) · Cloud AI Integration · Hybrid Cloud-Edge Systems · Remote & Non-standard Communications (Satellite, Mesh Radio, LTE) · AI/ML Pipeline Development · Python · Data Pipeline Design

Leadership & Instruction: Graduate-Level Research · Clinical Education & Curriculum Design · Scenario-Based Simulation · Program Management · Public Speaking & Conference Lecturing

EXPERIENCE

Captain

Austin-Travis County EMS · Austin, TX

Clinical Specialist Program / Advanced Practice Education

Sep 2025 – Sep 2026

- Developed and implemented the department's first POV camera-integrated scenario recording system, enabling synchronized same-or next day review by candidates, field training officers, and program administration — improving feedback quality and educational transparency across all levels.
- Assisted in curriculum and implemented improved assessment practices, increasing transparency and consistency in candidate evaluation throughout the program.
- Delivered scenario-based instruction in advanced airway management, mechanical ventilation, and damage control resuscitation.
- Mentored clinical specialists and advanced practice paramedics through promotional preparation, field evaluations, and long-term development pathways.

Captain – Medic 8

Mar 2023 – Sep 2025

- Led station operations at a high-volume urban station — personnel management, logistics, clinical oversight, and 24-hour readiness.
- Provided extended-scope advanced practice critical care transport including RSI, mechanical ventilation, and blood product administration.
- Mentored paramedics and clinical specialists through live operations and high-acuity incidents.

Captain – Designated Medical Officer

Oct 2022 – Mar 2023

- Contributed to prehospital whole blood protocol implementation in compliance with AABB standards, establishing real-time data sharing with We Are Blood — Austin's regional blood supplier.
- Designed and built a mobile field documentation application enabling commanders to complete blood product change-out documentation and real-time data collection from their phones during operations.

- Led QA/QI review processes and collaborated with the Office of the Medical Director and partner agency stakeholders, including local and regional emergency services partners.

Captain – Continuing Education

Mar 2022 – Oct 2022

- Designed and delivered department-wide CE programs spanning all provider levels — from BLS through advanced practice critical care — including advanced airway management and transport ventilator operations.
- Developed and delivered the education and validation pathway that enabled system-wide transport ventilator authorization for all advanced practice providers, coordinating stakeholder alignment and securing approval through the Office of the Medical Director.

Clinical Specialist – Special Operations

Oct 2014 – Mar 2022

- Delivered advanced medical care across hazardous conditions such as swift water, high-angle, and confined-space rescue environments.
- Texas A&M Task Force 1 (TX-TF1) — ATCEMS rescue paramedic qualified for deployment across Urban Search & Rescue, swiftwater rescue (boat), and Helicopter Search & Rescue operations under the FEMA Type-1 national US&R system.
- Developed and implemented the first live after-action review for ATCEMS Special Operations— integrating real call data, operational and medical analysis, and real-time multi-agency participation including AFD Special Operations, with open discussion facilitated by medical direction and relevant stakeholders.
- Mentored clinicians in rescue medicine, advanced qualification pathways including FP-C preparation, and physical and mental conditioning support for the program's rigorous entry requirements.

Clinical Specialist – Field Paramedic

Sep 2008 – Oct 2014

- Entry-level advanced life support provider in a high-volume urban EMS system; served as Field Training Officer and preceptor for paramedic students and new hires.

RESEARCH, PROJECTS & PROFESSIONAL SERVICE

Founder — AI in Austere Medicine Project (AI-AMP)

Jan 2026 –

- Open-source research initiative building the tools, methodology, and evidence base for AI-driven clinical decision support in austere, disconnected, and resource-limited environments. Built by clinicians. Evaluated by real providers. Published openly.
- Active workstreams: hybrid cloud-edge CDSS, fully offline edge LLM deployment, and non-standard communications integration for denied environments.
- Operational field deployment testing, Tanzania, Africa August 2026 — edge-deployed CDSS with comprehensive clinical protocol indexing and integrated non-standard communications including satellite, mesh radio, and LTE.

Core Committee Member — Wilderness Medical Society, AI Committee

Jun 2026 –

- Appointed to advance evidence-based AI adoption within the WMS; focus areas include AI in austere and wilderness medicine, member-facing tools, and clinical AI governance frameworks.

EDUCATION

Master of Science — Austere Critical Care

2024 -

College of Remote and Offshore Medicine Foundation

- Thesis: Artificial Intelligence for Diagnostic Accuracy and Clinical Decision-Making in Austere Medical Environments: Clinician Perspectives from the Field.
- Operational field deployment testing, Tanzania, Africa August 2026.

Bachelor of Science — Emergency Health Science

University of Texas · San Antonio, TX

20219-2024

Associate of Applied Science — Emergency Medical Services

Oklahoma City Community College · Oklahoma City, OK

2005-2008

CERTIFICATIONS & LICENSURE

NRP National Registry Paramedic — NREMT · 2008 · #M5122287

LP Licensed Paramedic — Texas DSHS · 2008 · #707544

WP-C Wilderness Paramedic Certified — IBSC · 2024 · #210

FP-C Flight Paramedic Certified — IBSC · 2019 · #0008531

Instructor EMS Instructor — Texas DSHS · 2011 · #174634

PROFESSIONAL ORGANIZATIONS

Wilderness Medical Society (WMS) · Special Operations Medical Association (SOMA) · World Extreme Medicine (WEM) · International College of Advanced Practice Paramedics (ICAPP) · National Association of EMS Educators (NAEMSE)

DIGITAL PRESENCE

GitHub: github.com/aazelton