

Mitchel Carson

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TS/SCI (active) • Software Engineering / AI & Data Science

Summary

USAF veteran and USAA SWE intern; graduated December 2025 (B.S. Computer Science, Cum Laude, 3.6 GPA). Enrolled in the University of Texas at Austin M.S. in Artificial Intelligence program (in progress; anticipated May 2027). Strong foundation in data-driven software engineering, machine learning workflows, and large-scale API systems; thrive in high-ownership, mission-critical environments where clarity, accuracy, and impact matter.

Skills

Back end: Java, Spring Boot, GraphQL, Node.js, SQL
Front end: JavaScript/TypeScript, React, HTML/CSS, D3, Chart.js
ML/DS: Python, PyTorch, TensorFlow, R, pandas, NumPy
Practices/Tools: Git, Jira, Agile/Scrum

Education

University of Texas at Austin

Austin, TX

M.S. in Artificial Intelligence (in progress)

Anticipated Graduation: May 2027

Relevant coursework: AI Ethics; Machine Learning; Deep Learning.

Appalachian State University

Boone, NC

B.S. in Computer Science; Data Science Certificate

Cum Laude

Full Stack Web Development Certificate (UNC Charlotte)

Graduated: December 2025

Cumulative GPA: 3.6/4.0

Senior Honors Thesis

Runoff Forecasting with Deep Learning

Undergraduate Honors Thesis

May 2025 – December 2025

- Developed advanced Transformer-based models to correct NOAA National Water Model (NWM) streamflow forecasts across diverse U.S. watersheds.
- Designed and implemented a modular PyTorch training pipeline for temporal sequence modeling, integrating multi-source data (NWM v3.0+, ERA5 reanalysis, USGS observations, land-use features).
- Automated feature normalization, data splitting, and evaluation using custom hydrologic metrics; achieved 26–54% RMSE reduction over LSTM baselines.
- Preparing a manuscript based on this thesis for planned submission to *Water Resources Research* (AGU).

Work Experience

USAA

Software Engineering Intern

San Antonio, TX

May 2025 – August 2025

- Enhanced the internal troubleshooter tool by integrating Non-Source-of-Record (SOR) name and employment data alongside SOR counterparts, improving data visibility for business partners and troubleshooters.
- Designed and implemented GraphQL APIs using Java and Spring Boot to surface core customer data services leveraged across enterprise channels.
- Collaborated in an Agile/Scrum team tracked via Jira; committed code through Git; participated in sprint planning, daily stand-ups, and retrospectives.
- Built and refined JavaScript front-end components to support new comparison views, ensuring responsive UI and seamless data updates.

United States Air Force

Executive Missions Aviator

JB Andrews, MD

August 2020 – April 2023

- Maintained passenger safety, schedule reliability, and comfort for distinguished guests of the U.S. Air Force aboard Air Force 2.