# Mitchel Carson

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**TS/SCI (active) • Seeking January 2026 Start — Software Engineering / AI & Data Science**

**USAF veteran and USAA SWE Intern graduating Dec 2025 (B.S. Computer Science, 3.6 GPA). Admitted to the University of Texas at Austin Master of Science in Artificial Intelligence program (Spring 2026). 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
**Appalachian State University, Boone NC**                                      **Anticipated Graduation: December 2025**
Bachelor of Science in Computer Science
Data Science Certificate
Full Stack Web Development Certificate (UNC Charlotte)
Cumulative GPA 3.6/4.0

**Senior Honors Thesis**                                                           **May 2025 - December 2025**
*Runoff Forecasting with Deep Learning*
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 with custom hydrologic metrics. Achieved 26–54% RMSE reduction over LSTM baselines, demonstrating robust improvements in multi-horizon streamflow prediction. I am preparing a manuscript based on my undergraduate honors thesis, with planned submission to *Water Resources Research (AGU)*.

## WORK EXPERIENCE
**USAA |** San Antonio, TX                                                         **May 2025 - August 2025**
*SWE Intern*
- 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**, committing code through **Git** and participating 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 |** JB Andrews, MD                                       **August 2020 - April 2023**
*Executive Missions Aviator*
Maintained passenger safety, schedule reliability, comfort, for distinguished guests of the U.S Air Force aboard **Air Force 2**. I was responsible for making contact and mission planning with the White House over the phone and through email.
Responsible for in-flight meal / drink service, baggage logistics, crew hotel bookings, crew and passenger subsistence billing, crew ground transportation, and visa applications.