Keaton S. Morales

keaton.s.morales@gmail.com
979-215-3741 • Justin, TX
Personal Website
LinkedIn Profile

Top Secret / SCI (Active)

Qualifications Summary

Highly motivated Computer Science and GIS student with proven success in high-pressure military intelligence environments and a strong foundation in software development principles. Highly proficient in C++, with working knowledge of C, Python, JavaScript, HTML, and CSS. With the ability to quickly learn and adapt to new programming languages and tools as required. Experienced in the full software development lifecycle, including concept design, implementation, testing, and documentation. Skilled in using GIT, Linux CLI, Qt Creator, ArcGIS Pro, and ArcGIS Online to support efficient and reliable project execution.

Areas of Expertise

- Software Development Lifecycle (SDLC)
- Computer Architecture & Operating Systems
- C++ Development
- Software Testing & Debugging
- Code Optimization & Refactoring
- Git & Version Control Systems
- Agile & Collaborative Development
- Data Structures & Algorithms
- Problem-Solving & Troubleshooting

Education

Bachelor of Science in Computer Science & Geographic Information Systems, University of North Texas, Denton, TX, Expected 2026

Advanced Geospatial Intelligence Training, U.S. Army, Fort Huachuca, AZ, 2020

Key Projects

Stack-Based Algorithms Library (C++)

- Designed a reusable, template-based stack data structure supporting multiple algorithmic applications.
- Implemented the Shunting Yard Algorithm for infix-to-postfix conversion and a postfix evaluator to compute expressions.
- Built a balanced-brackets validator to verify expression syntax accuracy.
- Automated input testing and validation to ensure reliability and consistent output.

Self-Balancing AVL Tree (C++)

- Developed an efficient self-balancing binary search tree ensuring O(log n) search, insertion, and deletion performance.
- Implemented stack-based iterative rebalancing with dynamic rotations (LL, RR, LR, RL) for optimal balance recovery.
- Enhanced overall system stability and query performance through modular code architecture.

Multiplayer Memory Match Game (C++)

- Created a console-based multiplayer memory match game featuring a dynamic 5×4 card grid and turn-based gameplay.
- Integrated random shuffling, score tracking, and game-state management for up to four players.
- Applied modular logic, validation checks, and responsive visual feedback for an engaging user experience.

Bank Account Management System (C++)

- Engineered an object-oriented banking system using linked-list data structures to manage account information.
- Utilized inheritance and polymorphism to enable flexible account hierarchies and feature expansion.
- Incorporated secure input handling, error checking, and file operations to improve reliability and data integrity.

Soldier Management System (C++)

- Developed a hierarchical personnel management system simulating military organizational structures.
- Applied OOP principles using STL containers (vector, map) for efficient data storage and retrieval.
- Implemented validation and error-handling modules to ensure accuracy and program stability.

Professional Experience

U.S. Army Reserve **2019 — Present**

Geospatial Analyst (Reservist), *2022 — Present*

Analyze imagery to support operational planning and enhance situational awareness using GIS and FMV tools. Create and brief actionable intelligence to inform decision-makers and refine military strategies. Develop and distribute geospatial data products to aid missions in defense roles.

- Created and disseminated actionable intelligence, improving situational awareness in complex operations.
- Mentored junior analysts and trained them on advanced geospatial tools, enhancing their skills and competencies.

U.S. Army

Geospatial Analyst / Aerial Sensor Operator / Mission Supervisor / Flight Instructor, *2019 — 2022*

Executed over 120 aerial reconnaissance missions, collecting critical intelligence to support operational objectives. Gathered and analyzed FMV, IR, SAR, and MTI data, providing actionable intelligence to enhance mission planning and situational awareness. Conducted training and operational supervision, ensuring mission readiness in a continuous 24/7 setting. Utilized advanced sensors and software such as Socet GXP, ArcGIS Pro, and ORION to deliver rapid and accurate assessments.

- Achieved flight instructor status, facilitating the training and advancement of over 20 soldiers to enhance unit capabilities.
- Spearheaded 100+ ISR missions, contributing significantly to intelligence gathering efforts and mission success.

Certification

AT&T Technology Academy 2025 • Code Generation and Optimization Using IBM Granite • Learn JavaScript • Learn HTML • Learn CSS

Relevant Coursework

Discovering Computer Science • Foundations of Computing • Computer Programming I & II • Data Structures and Algorithms • Software Engineering (Spring 2026) • Algorithms (Spring 2026) • Software Development for Artificial Intelligence (Spring 2026) • Intro to GIS • Advanced GIS • Intro to GIS Programming • Advanced GIS Programming • Enterprise GIS • Remote Sensing