

Nikolas Hawley

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Technically knowledgeable Geographic Information Systems Professional (GIS) Subject Matter Expert (SME) and future Professional Engineer (PE). Seeking opportunities to gain experience in the civil engineering industry and bring spatial perspective and analytical data insights to help solve real world challenges in a variety of applications. Areas of interest include water resources engineering, hydrology, flood hazards, transportation infrastructure planning and design, geotechnical engineering, environmental engineering, surveying, integration of unmanned aerial systems (UAS) and photogrammetry in surveying, and integration of geospatial analysis in Search and Rescue and Disaster Management operations.

Education & Professional Development

- **Bachelor of Science – Civil & Infrastructure Engineering, Minor – Geographic Information Systems** | George Mason University
- **Geographic Information Systems Professional (GISP)** | GIS Certification Institute
- **ArcGIS Desktop Associate** | Esri
- **GEOINT Professional – Geospatial Analysis Proficiency Level II (GPC GA-II)** | National Geospatial-Intelligence College
- **Geospatial Engineer Course** | U.S. Army Engineer School
- **Basic Instructor Course** | Civil Air Patrol
- **FedGIS** | Esri (2019, 2021, 2023)
- **Esri Defense and Intelligence Showcase** | Esri (2017)

Work History

Undergraduate Research Assistant

George Mason University | Fairfax, VA | 1 year (January 2024 – December 2024)

- Accomplished exceptional academic performance and research contributions by furthering scholarly pursuits and actively engaging in environmental engineering and science research in septic system failure under severe precipitation events, resulting in valuable insights for potential publications.

Engineering Intern

Bowman Consulting Group | Fairfax, VA | 3 months (July 2023 – September 2023)

- Conducted site stormwater, erosion, & sediment control (SWPPP) inspections, assisted Engineers with plan mark-ups, conducted hydraulic analysis with HEC-RAS, developed maintenance of traffic plans, and provided GIS subject matter expertise, increasing the water resources engineering team's risk assessment and workload capabilities.

Learning Assistant

George Mason University | Fairfax, VA | 1 year (January 2022 – December 2022)

- Enhanced student learning in Intro Geographic Information Systems (GIS) for ~20 students and Physical Geography for ~50 students by delivering in-class assistance, leading select lectures, and hosting office hours, ensuring comprehensive class support and fostering a dynamic learning environment.

Survey Computer

Gordon Associates | Fairfax, VA | 3 months (June 2021 – August 2021)

- Streamlined GIS application development for the National Cemetery Administration by converting hundreds of CAD objects into GIS deliverables, ensuring seamless data incorporation, and enhancing the efficiency and accuracy of cemetery management and visitor systems.
- Enhanced field survey efficiency for diverse commercial, federal, and residential projects by assisting the Survey Party Chief in site topographic surveys, stream & road alignment profiles, as-built surveys, and more, ensuring precise data collection and project alignment, ensuring overall project success.

Senior Geospatial Engineer

PA Army National Guard | Annville, PA | 3 years (February 2019 – February 2022)

- Empowered a team of four geospatial engineers by providing mentorship and guidance in operational excellence in preparation for military deployment. Additionally, collaborated with leadership to manage administrative aspects, ensuring team readiness for mission success.
- Facilitated operational decision-making by extracting geographic data from various sources including satellite imagery and field reconnaissance to compile Geospatial Intelligence (GEOINT) map products. Additionally managed ArcGIS geodatabases, ensuring data integrity, and provided comprehensive technical briefs covering terrain and geospatial phenomena.

Geospatial Analyst II

BAE Systems Inc. | McLean, VA | 10 months (April 2019 – January 2020)

- Served as the primary Geospatial Analyst representing the National Geospatial-Intelligence Agency (NGA) within an office of the Central Intelligence Agency (CIA), coordinating with inter-agency partners to understand and fulfill geospatial requirements, ensuring successful mission execution.
- Supported counterterrorism missions for NGA and CIA by conducting vulnerability assessments of US embassies globally and producing other custom map and geospatial products, for the incorporation of full spectrum geospatial-intelligence (GEOINT) within mission planning and operations.

Geospatial Engineer

US Army | Fort Campbell, KY | 4 years (February 2015 – February 2019)

- Optimized intelligence analysis workflows by creating custom geoprocessing models with ArcGIS Model Builder and Python scripting. This innovation significantly reduced analysis time from days to hours, resulting in the award of the Army Achievement Medal for impactful contributions.
- Produced specialized map and geospatial products to bolster intelligence analysis for Special Operations Aviation missions across a global area of responsibility. These custom products provided critical support, enhancing mission planning and execution effectiveness.
- Established precedence for future GIS functions within the 160th Special Operations Aviation Regiment (SOAR) as one of the first five geospatial engineers assigned to the unit, by developing standard operating procedures and workflows for the implementation of geospatial data management, analysis, and technologies within the SOAR intelligence enterprise.

Field Services Technician

QC Laboratories | Southampton, PA | 8 months (May 2014 – December 2014)

- Collected in-situ samples and field data encompassing sanitary wastewater, industrial effluent, pool water, potable water supply, and diverse food samples, crucial for health and environmental regulatory compliance testing.
- Ensured the integrity of samples by maintaining proper chain of custody and safely transporting them to the laboratory for testing, while also efficiently managing an independent schedule, conducting 60-80 field samples weekly from diverse sites.

Volunteer Experience

GIS Specialist

Civil Air Patrol – U.S. Air Force Auxiliary | 6 years (July 2018 – Present)

- Provides Geospatial analysis, products, data management, and Geospatial Subject Matter Expertise for the Civil Air Patrol Pennsylvania Wing and National Headquarters in support of Emergency Services, Disaster Relief operations, and organizational business intelligence insights through the development of strategic organizational data insights in web-GIS based dashboards, maps, and applications.

Chapter Officer

American Society of Civil Engineers at George Mason University | 3 years (August 2020 – May 2023)

- **President** (Spring 2023): Served as President for 250+ member student chapter; Provided strategic outlook, plans, and leadership for the current and future success of the chapter.
- **ASCE Student Ambassador** (2022-2023): Represented and promoted ASCE on campus and social media; Assisted and mentored chapter leadership.
- **Survey Party Chief** (2021-2023): Led the UESI Surveying Competition Team of six, which represented GMU for the first time in this new ASCE Student competition; Placed 2nd in 2022 regional competition, 2nd in Field Survey Engineering and 3rd overall in 2022 national competition.
- **2022 Construction Institute (CI) Student Days Participant** (2022): Selected to participate in an intensive four-day exercise in construction project bidding and proposals with Civil Engineering and Construction Management students from across the nation.
- **Recruiting & Membership Officer** (2021-2022): Maintained membership information for 150+ student chapter members and lead recruiting events; Managed & assisted five Project Managers for three ASCE Society-wide Student Competition teams, successfully representing GMU to the greater ASCE community; Each team placed in the 2022 Region 2 West Student Symposium against 14 other regional schools and qualified for Nationals.
- **Safety & QA/QC Manager** (2020-2021): Led safety awareness training for ~20 team members on hazards associated with small scale concrete construction for 2021 Concrete Canoe Competition Team; Developed a project Knowledge Management initiative to capture Lessons Learned for future iterations of the project.

Honors, Awards, & Achievements

- **Exceptional Volunteer Service to the Department** (2023), Dept of Civil, Environmental, & Infrastructure Engineering, College of Engineering and Computing, George Mason University
- **FedGIS Making A Difference Award** (2023), Esri
- **Air Force North Commander's Most Meritorious CAP Mission of the Year Award** (2022), Civil Air Patrol
- **Maj Gen Mark Smith JanEX Prize for Innovation** (2022), Civil Air Patrol
- **J.A. Padgett Memorial Scholarship** (2022), National Capital Section, American Society of Civil Engineers
- **Crisis Service Award** (2021), Civil Air Patrol
- **Air Force Organizational Excellence Award** (2018), Civil Air Patrol
- **Army Achievement Medal** (2017), U.S. Army
- **Airborne Qualified** (2015), U.S. Army
- **Amelia Earhart Award** (2014), Civil Air Patrol
- **Eagle Scout** (2012), Boy Scouts of America
- **Order of the Arrow** (2011), Boy Scouts of America
- **Brig Gen Billy Mitchell Award** (2011), Civil Air Patrol
- **Keystone Boys State Speaker of the House** (2011), American Legion