Brian Cavanaugh

cavanaughbe@gmail.com | 540.520.6559 | TS/SCI Cleared

EDUCATION

GWU

MS IN COMPUTER SCIENCE Dec 2011 | Washington, DC

VIRGINIA TECH

BS IN ENGINEERING

May 2004 | Blacksburg, VA Dual Degree:

- Ocean Engineering
- Aerospace Engineering

Minor in Mathematics

SKILLS

PROGRAMMING

Expert:

Python • Matlab • Bash • IDL Comfortable:

Docker • C/C++ • Java

Familiar:

 $\texttt{AT}_{\texttt{E}} \texttt{X} \bullet \texttt{AWS/C2S}$

TECHNICAL

INTERESTS

Data Science • Data Analytics Data Mining • Computer Vision Machine Learning • Remote Sensing Big Data • Multi-Sensor Fusion App Development

LINKS

Github://jagahanas LinkedIn://bcavs

EXPERIENCE

THE MITRE CORPORATION | June 2007 - Present | McLean, VA DATA SCIENTIST

- Developed baseline tracking algorithms to: prove state-of-the-possible tracking on challenging datasets, provide requirements generation and validation
- Created tracking metrics for evaluating tracker performance in Wide Area Motion Imagery (WAMI) data
- Experimented with manmade object detection in images and Full Motion Video (FMV)
- Enabled the prototype Human Geography Widgets: Socio-Cultural Resource Registry; Semantic Annotation Widget; Provenance Capture Widget; Fitness Widget
- Coded several programs for the processing of Hyperspectral Imagery (HSI): FSpECT, a Bayesian evidence combination tool; HSI Exploitation tools for the analysis of crops; "Super Resolution" sharpening
- Software Evaluation of Hyperspectral Imaging Gas Identification algorithms: HIP, NSOM, HEAT

PROJECT LEADER OF THE GEOINT ANALYTICS PROJECT AREA SUPPORTING THE NATIONAL GEOSPATIAL-INTELLIGENCE AGENCY RESEARCH (NGA/R) COMPONENT

- Represented half of MITRE's presence in NGA/R while developing, building, maintaining, and growing impactful research plans and sponsor relationships in the fields of Image and Video Exploitation, and Geospatial Cyber
- Managed the staffing, execution, and direction of 8 tasks totaling 12 STE through communicating with the sponsor, ensuring the delivery of the work, balancing the budgets and plans, and managing the many personalities of portfolio and resource divisions

GROUP LEADER OF THE DATA ANALYTICS GROUP WITHIN THE INTELLIGENCE, SURVEILLANCE, AND RECONNAISSANCE (ISR) DEPARTMENT P531

- Created a motivated, talented, highly skilled group able to attack and solve a variety of Machine Learning, and Data Science problems
- Recruited, interviewed, hired, and supervised the careers and Human Resources needs of more than 10 employees at various levels (MTS 2-5), spanning multiple sponsors, portfolios, projects, and tasks

NAVAL SURFACE WARFARE CENTER, CARDEROCK DIVISION

Sept 2005 - June 2007 | Carderock, MD

MECHANICAL ENGINEER

- Planned and executed model scale submarine test maneuvers matrix
- Wrote engineering reports compiling findings from model scale tests
- Designed, built, and maintained working mechanical and electrical components for free moving submarine models
- Experimented with novel underwater communication methods including acoustic beacons, wi-fi, and hi-fi