ABIGAIL SPENCER

abigailspencer.dev@gmail.com | TS/SCI and CI Poly

Geospatial Data Analyst

National Geospatial-Intelligence Agency; Springfield, VA   OCT 2022 – PRESENT

Data Lead for the premier Department of Defense Artificial Intelligence/Machine Learning program managing 30 data professionals in a high-impact, high-visibility program with revolving priorities and cutting-edge goals:

- Successfully manage multiple large contracting companies as a cross-functional team to support data curation and acquisition, test and evaluation of computer vision models, and model development, establishing relative priorities, timelines, and scope of engineering deliverables.

- Effectively manage multiple large contracting companies in support of a cross-functional team to support data curation, test and evaluation of computer vision models, and model development, establishing relative priorities, timelines, and scope of engineering work.

- Analyzes geospatial data and metadata from overhead satellite imagery for development of artificial intelligence capabilities of computer vision algorithms by applying analytic techniques to identify trends and evaluate gaps. Performs statistical analysis to evaluate data using custom-built software in Python and SQL as well as with existing data visualization tools.

- Partner with multiple, broad stakeholders to develop and execute strategic program initiatives with aligned goals for data transformation initiatives, ensuring alignment with organizational goals while effectively managing program risk and maintaining quality standards.

- Maintains program data and meaningful metrics to ensure relevant and reliable data available for model development and research. Sustain and continuously improve data labeling curation to elevate AI training data, metric-tracking abilities for deeper analysis, quality assurance, and measure imagery curation techniques to improve available training data for impactful model performance.

- Manages hundreds of petabytes of program data and metadata, ensuring data availability for ML and deep learning model development and research that is accurate, consistent, and of high quality. Data includes millions of complex satellite images in multiple formats, data labels, and associated metadata.

- Continuously improve data labeling curation to elevate AI training data, metric-tracking abilities for deeper analysis, quality assurance, and measure imagery curation techniques to improve available training data for impactful model performance for customers

- Advise and monitors multiple cross-functional contractor teams on data standards and governance requirements and promotes integration into existing architectures and workflows. Collaborates with customers and other data professionals to build data structures and interfaces.

- Advise and monitors multiple government agencies and contractor teams on data standards and governance requirements to improve data discovery and utilizations and promotes integration into existing architectures and workflows while managing program timelines and defined deliverables and objectives.

- Leads technical evaluation of complex data pipelines and systems for efficiency, optimization, and formalizing documentation of the end-to-end system, enabling continuous improvement for issue resolution, analysis, capabilities

- Responsive to operational customers and real-world, real-time events with imagery curation for focused data collection to prevent data drifts and ensure relevant AI training data is available for model development and customers. Engages with operational customers and combatant commands for data needs and preparation.

- Coordinates strategic initiatives and projects to promote data cleansing and healing, and ensures data is of high quality by collecting, cleaning, analyzing, and interpreting to train, validate, and test algorithms. Establishes data pipelines for migration of data, database metadata management, and communicating performance metrics to leadership.

- Collaborates with several federal agencies and organizations to build interoperable ontologies and taxonomies for data labeling, object detection model outputs, and data sharing across the federal Intelligence Community, DoD, and other federal government entities. Directly responsible for design and curation of over 200 object classes across four modalities, including 13 attributes with complex relationships.

- Effectively articulates challenging technical concepts to both lay and expert audiences to senior-level leadership current data holdings and needs to further model development success with actionable, data-driven recommendations.

- Effectively articulates challenging technical concepts to both technical and non-technical audiences to senior-level leadership, including US Congressional leaders, presenting program status, risks and trade-offs, and data-driven recommendations to further model development success that are actionable and measurable.

- Run several program-specific meetings weekly with specific follow-ups and deliverables across multiple complex lines of efforts with strong judgement in executing relative priorities and deliverables with little oversight to continuously improve existing data holdings and metadata availability for robust model development and research

Special Operations Intelligence and Data Analyst

Joint Special Operations Air Component – Central; Spartan Base, Qatar   MAY 2021 – JUN 2022

Regional air command supporting special operations at a strategic level:

- Communicated written and graphical intelligence data for operational planning and threat analysis to various audiences for data-driven recommendations. Performed statistical analysis and generated time-series data visuals, permitting streamlined risk analysis, demonstrating high-level insights for immediate action and direction.

- Communicated written and graphical intelligence data for operational planning and threat analysis, performing statistical analysis and generating time-series data visuals for streamlined risk assessments and high-level insights

- Enabled strategic and tactical mission safety and success by rapidly adapting to regional instability and navigated sensitive operational requirements and situations with respect to cultural norms and geo-politics.

- Navigated cultural ambiguities by building joint and combined coalitions across military and intelligence community organizations and departments for critical, niche, expertise, leading to comprehensive recommendations.

- Established and sustained quantitative databases and common operation pictures for intelligence risk assessments, regional analysis, and research for senior-level military officers, building actionable reports that drove operational preparation.

- Crafted and preserved common intelligence pictures for tactical supported commands through information management and dissemination, safeguarding quality assurance, fitted for customer requirements.

- Directed intelligence, surveillance, and reconnaissance assets for critical real-time mission success, rapidly adapting to mission and operational requirements. Maintained battle-space awareness for safety of flight and intelligence needs.

- Established and sustained quantitative databases for data-driven intelligence risk assessments, regional analysis, and research for senior-level military officers

Intelligence Analyst

Indianapolis Metro Police Department; Indianapolis, IN   AUG 2020 – DEC 2020

Federal and state initiative to investigate gun violence with an ATF task force at the Crime Gun Intelligence Center:

- Analyzed gun crime data (qualitative and quantitative) collected from crime scenes to ensure appropriate linkage of crimes, guns, and suspects, utilizing open-source, public information, and social media, resulting in the eventual arrest of criminals. Analysis helped informed resource and logistical decisions by federal officers to arrest correct suspects.

- Utilized social networking analysis and link analysis to identify current and future criminal organization members to combat future gun violence across the country. Translated results into clear figures and facts (e.g., percentages, metrics, tallies) that could support broader decision-making and reports.

- Analyzed and interpreted "seize and arrest" statistics for inclusion in operational plans and information sharing efforts across nationwide police departments. Analysis enabled police departments to better understand if their efforts were helping to decrease gun violence nationally

Intelligence Analyst

Allied Universal; Indianapolis, IN   JUN 2019 – JUL 2020

Served as the intelligence hub for matters of national security initiative to mitigate crime:

- Collected qualitative data to construct a quantitative Excel-based database for easier analysis, tracking, and reporting of intelligence reports. Analysis provided trends, statistics, and recommendations to generate intelligence mitigation strategies for future security officers' deployments and risk procedures.

- Prepared multi-page statistical reports on historical and predictions of future risks, utilizing data-driven solutions in complex organized crime

- Revamped monthly intelligence databases and reports in conjunction with clients to improve and personalize analysis suited for targeted individual infrastructures. Database improvements enabled office to better to identify vulnerabilities and reduce crime, setting the new standard.

- Conducted verbal and disseminated written intelligence briefings to various levels of audiences, including key stakeholders, to notify of national security threats, relevant protests, and emergency management issues.

- Prioritized several individual and group projects, coordinated with stakeholders and senior directors, while monitoring social media data mining tools, intelligence outlets, and law enforcement bulletins.

U. S. Naval Reserve Intelligence Analyst

Deployment, VAQ-209; Whidbey Island, WA   FEB 2020 – AUG 2020 and JUN 2022 – OCT 2022

Supported operational and intelligence planning for Growler squadron PACOM deployment:

- Produced high-level intelligence reports and briefed 20 senior officers daily on foreign developments and threats, earning a Fleet Letter of Commendation for outstanding performance supporting overseas operations.

- Briefed intelligence and aviation senior officials on intelligence trends, patterns, recent developments, and gave predictive analysis and assessments for future contingencies.

- Conducted fusion intelligence analysis and research to develop weekly intelligence briefings on current foreign intel within the operational environment.

NASIC, WPAFB, OH; EUCOM HQ, Stuttgart, Germany   APR 2018 – NOV 2020

- Exploited and analyzed GEOINT in a joint-service intelligence community environment, briefing senior officers on foreign military operations and potential indications and warnings of logistical movements.

- Maintained intelligence collected from various established sources for production of intelligence documents.

- Conducted all-source and analysis and research to brief senior government officials, earning a nomination for Junior Sailor of the Quarter.

Federal Background Special Investigator

General Dynamics Information Technology, Indianapolis, IN　　　　　　　　　AUG 2017 – JUN 2019

Supported the federal government in federal background investigations for security clearance suitability by:

- Analyzed financial, criminal, and personal records for comprehensive interviews and suitability reports, including credit and bankruptcy reports to determine potential financial risk factors, while ensuring protection of legal rights.

- Collaborated with various government and military agencies to obtain confidential information of subjects in accordance with federal policies, procedures, regulations, and statutes.

- Tactfully investigated and interviewed assorted associates, designed to elicit potentially derogatory or discrepant information while protecting confidentiality of sources to compose detailed and organized written personnel reports, and maintained professionalism when experiencing sensitive, complex, and ambiguous scenarios.

EDUCATION

B.S. Criminal Justice　　　　　　　University of Indianapolis　　　　　　　Indianapolis, IN

In Progress - B.S. Data Science　　　　　　Indiana University　　　　　　　PRESENT

- Database Management (Palantir DMP, phpMyAdmin, PostgreSQL)
- Python and SQL Programming

SKILLS / TECHNOLOGIES

- Experienced in data science and analysis, manipulation, and visualization: Python, SQL, Tableau

- Proficient in database creation, management, and creating various data visuals for easily digestible reports

- Accomplished in high-profile informative briefings with senior officials, managing ever-changing information, and successfully coordinating efforts across various stakeholder groups

---

TECHICAL SKILLS & ENGAGEMENTS

- **Program Management:** Stakeholder management, program planning, risk mitigation, resource management, quality assurance, contract writing and management, deliverable monitoring; earned a personal award for stellar contract accountability for deliverables and federal contract writing

- **Data & Metadata:** Database management, data governance, taxonomy development, metadata standards; proven track record of managing complex metadata and data management for enhanced data availability, utility, and usability in highly effective solutions

- **Technical:** Python, SQL, data visualization, PostgreSQL, phpMyAdmin, MySQL

- **Communication:** Cross-functional collaboration, technical writing, senior-executive briefings, documentation.

- **Ontology Expertise:** Panel member at the 2nd Annual National System for GEOINT Artificial Intelligence/Computer Vision Summit, focused on AI interoperability challenges and opportunities for responsible AI in GEOINT functional management.