Anna Heithier | 253-345-9275

SYNOPSIS

Clearance: TS/SCI with FS Poly

EDUCATION

University of Massachusetts Amherst Master of Science Electrical and Computer Engineering
University of Nebraska Kearney Bachelor of Science Mathematics

LANGUAGES AND TOOLS

- Advanced Python (Spyder/Jupyter/PyCharm), pandas, NLTK, scikit-learn, Matplotlib, json, Matlab, PostgreSQL, pgadmin, NIFI, AWS data collection (S3 buckets), QGIS
- Telemetry Analyst, Digital Signal Processing (Radio Frequency Wireless applications)
- Git -> Github, BitBucket (Experienced in Atlassian Confluence and JIRA)
- Video Training: GoToWebinar, BlueJeans, Slack
- IoT: RabbitMQ, ActiveMQ, Mosquitto, MQTT, Sensors, Collection platforms
- USRP/GNU Radio, Raspberry Pi, Arduino, x-midas
- Statistical modeling, Algorithm development, and Pattern recognition
- Operating Systems: OSX, LINUX, RASPBIAN, and WINDOWS

WORK EXPERIENCE

Radiant Solutions | MAXAR *Data Engineer – Electrical Engineer* **January 2017 to Present**

I. Collection SME for both IC and DOD projects and efforts. Working with a team of Engineers and Data Scientists to study and analyze collection gaps, telemetry, sensor lay-downs, and the transfer of data for a variety of collection platforms.
    - Working within the collection framework to extract, transform, and load (ETL) data to a centralized server space.
    - Feature Engineering a variety of data streams feeding into a data science analytical stream.
    - Applying digital signal processing applications across multi-signal architectures.

II. Part of a Data Science and Data Engineering team responsible for gathering and collecting multi-int and multi-source data who applies real-time processing using scripting language techniques to feed several predictive rule-engine models focused on National Security target areas:
    - Analytical data engineer focusing on collection to create analytical models for National Security mission areas: space, airborne, and terrestrial.
    - Turning raw data into deliverable actions. Applying statistics, machine learning, and analytic approaches to solve critical problems and laying down the foundation for future collection strategies.
    - Using complex machine learning and statistical methods to prepare data for use in predictive and prescriptive modeling surrounding National Security areas. Working with senior management, technical, and client teams to determine data requirements, business data implementation approaches, best practices for advanced data manipulation, and storage and analysis strategies.

- Oversee the extraction of data from multiple internal and external sources. Hands on experience working with very large data sets, including data cleansing/transformation, statistical analyses, and visualization. Explore and examine data from a variety of angles to determine hidden weaknesses, trends and/or opportunities.

III. IoT Industry: Working across various IoT vendors, government, and research entities identifying areas of significant concern about the security and personal identifiable information that can be released via the wireless connections between a smart device and the control device.

   a. Developing and implementing Android, Arduino, USRP/GNURadio, and Raspberry Pi applications associated to the Internet of Things (IoT), this includes using ActiveMQ, RabbitMQ, and Mosquitto with MQTT topics and queues.

Booz Allen Hamilton, Offutt AFB NE *Technical Engineering Consultant* **01/2012 to 01/2015**

I. RF Wireless Subject Matter Expert (SME) with the Air Force 55th Wing for collection, detection, and processing signals of interest, and facilitating testing projects that included requirements gathering, statement of work, approval of requirements, managing budgets, and leveraging many open source resources (both hardware/software) to save on costs and mitigate counter-intelligence signatures.

II. Project and mission manager for my client in areas of costs and suboptimal performance within mission critical arenas for RF Wireless Collection Responsibilities.

III. Analyzing the full mission lifecycle of Hardware to ensure Commercial and/or Government off the shelf (COTS/GOTS) products provided the best performance not only for the current life cycle but also upgrades and future implementations.

IV. Leveraged by senior level government and commercial managers regarding RF collection capabilities (UHF/VHF/SHF) for not only terrestrial assets but also National assets. I help aid the decision making processes for briefings and meetings for the intelligence squadron commanders by providing them unbiased and factually based intelligence information.

V. Developed requirements and CONOPS for advanced communications systems. Performed waveform assessments and vulnerability analysis which included writing reports for published intelligence. Honed in on a strong foundation in statistical machine learning, which includes pattern recognition and behavioral examination with x-Midas software.

Central Intelligence Agency *Intelligence Signals Analyst* **01/2003 to 02/2011**

I. Operations Leader with experience in design process methodology for a team of 9+ employees responsible for building communication systems from cradle to grave. Sustained effective balance between the big picture and micro level strategic requirements for program execution.

II. Focused training using All-source analysis to assess, analyze, investigate, and write products which would serve policy makers, military officials, and other government agencies.

III. Engineer who successfully combined both analytical and technical intelligence gathering focused on SIGINT analysis for a variety of wireless systems using x-midas, c, and python.