**Michelle L Hutchison** [Michelle.l.hutchison@gmail.com](mailto:Michelle.l.hutchison@gmail.com)

**Experience**

**Technical Targeting Developer / Analytic Methodologist (5/2018-present)**

* Add features to a standalone electron application run on JQuery, push updates to branch in GitHub
* Apply technical knowledge to pull signatures and insight from large data sets to include spatial data
* Build Jupyter Notebooks and Rmd/RScripts containing features in R and Python libraries for analytic workflows, insights, and presentations to customers
* Created a web application tool using React and Node JavaScript to help parse and format strings in datasets to input into other tools and applications
* Create standalone html file from R interactive documents and Shiny applications for visualizing data in tables, leaflet maps, timelines, and social networks
* Guide analytical teams through workflows and presentations, provide QAQC and recommendations throughout the projects
* Lead office wide training on R and Python libraries and functions, data science and data mining concepts for technicians and analysts to apply to their problem sets, provide walk through presentations and desksides
* Perform various exploratory data analysis using Tableau, ArcGIS Pro, RStudio, and Jupyter Notebooks
* Recreated a standalone tool in web format using React.js that reformats data inputs into different variations
* Retrieve subsets of data into dataframes, csv, shp, kml, and other formats from hdfs/hive/impala using RODBC, rgdal, (R) pyhive, pyspark, pandas (python)
* Track work in JIRA and share insights and analytics to the office on Confluence (Atlassian Suite)

**Lead Geospatial Data Analyst – BAE Systems (6/2014-5/2018)**

* Develop a solid business and data understanding as well familiar with already developed analytics such as geospatial temporal analysis for attributes changing both geospatially as well as over time
* Work on a multi-intelligence team to develop new analytics with multiple large sets of data to solve hard problems applying Activity Based Intelligence principles fusing geospatial layers to further characterize data
* Explore and visualize large data sets using Tableau, RStudio, and ArcGIS Pro
* Sort, filter, and enrich datasets using HIVE/Impala/SQL queries creating external tables, joining tables, and extracting tables to other tools like RStudio, Jupyter Notebooks, Tableau, and ArcGIS Pro
* Created RScripts to automate common workflows such as automatically extract data from HIVE and generate a shapefile for further analysis and visualization for final reporting.
* Provide desk sides with co-workers and visiting customers to show what has been done to explore and visualize data in Tableau
* Continue to learn new data sets and analytics developed both within and outside of the office
* Act as an intelligence discipline lead providing quality control of geospatial and imagery aspects of products prior to release
* Provide NGA imagery and geospatial intelligence support to team as well as office, remain knowledgeable on NGA capabilities and image/map product standards

**Imagery Analyst – BAE Systems (5/2012-6/2014)**

* Responsible for conceptualizing, coordinating, researching, and writing official NGA intelligence reports to include GEOINT Quick Notes, First Looks, and Supplemental Intelligence Reports
* Analyzed U2 Senior Year Electro-Optical Reconnaissance System (SYERS), Global Hawk (EO, IR, SAR), NTM (National Technical Means), Commercial, and Predator FMV (Full-motion Video) to research and develop targets maintained in a structured observation management (SOM) database
* Duties included fusing Imagery, FMV, SIGINT, and All-Source to research and develop IMINT and GEOINT reporting

**Imagery and Full-motion video (FMV) Analyst – BAE Systems (9/2009-5/2012)**

* Exhibited strong oral and written communication skills by performing crew functions to answer mission requested EEI and provide intelligence assessments to NGA, military customers abroad, and other IC analysts
* Analyzed FMV from Unmanned Aerial Vehicles for a government client supporting real-time 24/7 counterterrorism operations watch floor and conducting target development
* Duties included fusing FMV, NTM, HUMINT, SIGINT, and All-Source to research and develop targets, and aiding collection and analysis of moving targets through the use of Open Map, Google Earth and NTM graphics
* Produced soft-copy intelligence products including mission graphics, target graphics, FMV analysis, written mission reports and cables
* Additional duties included training new personnel on all positions and tasks related to the job, created Visual Basic programs in Microsoft Office to assist in report writing and simulated analyst tools to assist in training

**Imagery Analyst – SAIC (10/2008-7/2009)**

* Responsible for exploiting U2 SYERS, Advanced Synthetic Aperture Radar System (ASARS), Measurement and Signature intelligence (MASINT) to include CCD and 2CMV; Global Hawk (EO, IR, SAR), NTM, and Predator FMV
* Duties included exploiting NTM and mission products to conduct change detection and produced spot reports, cables, and mission graphics
* Conducted quality control of imagery and reports and managed UNIX folders and database to ensure delivery of products to customer

**Imagery Analyst - United States Air Force (3/2004-3/2008)**

* Responsibilities included exploiting U2, Global Hawk, NTM imagery and Predator FMV, communicating to the customer in real-time over chat and email, distributing tasks to imagery personnel, provided quality control and ensured proper delivery of products, inputting mission information into database and maintaining files in UNIX folders
* Additional duties included Predator Systems Matters Expert and magnetic media monitor

**Skills**

Access, ArcGIS, Arcpy, ArcInsights, ArcGIS Model Builder, ArcGIS Pro, ArcMap, Digital Video Analyzer, Excel, Google Earth, GitBash, GitHub, Hadoop/HIVE/Impala. hdfs queries, Intelligence Writing, Jabber, Javascript, JEMA, jQuery, Microsoft Office, Mirc, Node.js, Palantir, Python, React.js, RStudio, SAS Enterprise Miner, SEDB, Structured Observation Management (SOM), SQL, Sqoop, Tableau, TAC, Time Series Analysis, Visual Basic (VBA), Visual Studio Code

**Clearance**TS/SCI with CI & Lifestyle Poly

**Education**

2015-12/2017 **Masters of Science in Data Analytics –**UMUC \*

8/2006-8/2009 **Bachelors of Science in Information Technology -**University of Phoenix

5/2004-3/2008 **Associates in Science of Communications Applications Technology**- CCAF

**Certifications**

**Security + CompTIA** Completed August 2018

**GEOINT Professional Certification - Fundamentals (GPC-F)**NGA, 12/2016

**Certified Imagery Analyst** Imagery Analyst Apprentice Technical School, Goodfellow AFB 5/2004-11/2004

**Education Details**

**UMUC MS Data Analytics Course Details \***

* Foundations in Data Analytics
  + Overview of Data analytics and data science concepts, analytic methods to approach business problems
* Data Management Visualization
  + Database concepts and exploratory data analysis using RStudio and Tableau
* Data Mining
  + Used data mining processes to develop analytics using example datasets
* Predictive Modeling
  + Used RStudio and SAS Enterprise Miner to build predictive models and evaluated them
* Big Data Analytics
  + Used SQL queries, RStudio, and Python notebooks in IBM Cloud to explore larger data sets and learned the concepts of Spark
* Data Analytics Capstone
  + Developed predictive model in order to attempt to predict Russian apartment complex housing prices in Russia (Kaggle dataset)
    - Used RStudio and SAS Enterprise Miner to perform descriptive and inferential statistics, feature selection, data preprocessing and feature engineering, model selection, and evaluation

**GIS Classes**

* Fundamentals of GIS
* Intermediate GIS for Analysis
* Activity Based Intelligence
* Advanced GIS Using Scripting
* Advanced GIS Using Models