

Mitch Neat

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EXPERIENCE

JDSAT

McLean, VA

Associate I - Data Scientist

Sept 2023 – Present

- Architected and implemented an Angular frontend, Flask backend, and SQLite database within an Azure repository compiling 1000s of simulated battle and patient movements to optimize the distribution and layout of medical forces in conflict areas
- Engineered a Python script leveraging OCR and NLP with BERT model to process 100+ diverse files, extract pertinent information and perform sentiment analysis with Doc2Vec, LDA, and other ML models for document comparison
- Developed a React and Flask web application that allows clients to independently compare documents in minutes, significantly reducing processing and turn around time
- Applied ETL process integrating 8 data streams to a unified Navy facility SQL database, improving accessibility and consistency

Associate II - Data Analyst

Sept 2022 – Sept 2023

- Doubled metrics fed into Tableau dashboard and redesigned layout to visualize limitations in access to care
- Demonstrated seasonal inefficiencies in bottom 5 performing Naval facilities with EDA and time series graphs
- Established a central Navy personnel SQL database by implementing ETL process combining 6 varied data sources
- Forecasted 35 Navy hospital's workload using ARIMA model fitted with Loess regression in R; then optimized work distribution to maximize number of providers reaching a deployability threshold for 3 separate time intervals

Junior Data Analyst

Oct 2021 – Sept 2022

- Conducted extensive EDA on Navy vaccine records identifying 100s of incomplete cases and areas to improve distribution then built a repository with automated daily data cleaning and analysis fed into a R Shiny app for client use in monitoring changes
- Utilized a random forest ML algorithm in Python to predict survival of Titanic passengers with a high 79% accuracy for ProDev
- Implemented YOLOv5 computer vision algorithm to identify invasive starfish in mp4 files and leveraged Google Cloud Services

Center for Biostatistics & Health Data Science at Virginia Tech

Blacksburg, VA

Bio-statistical Research Analyst Assistant

Nov 2020 – Oct 2021

- Developed interactive React web app to visualize client's historical chapter participation data across 50+ locations
- Modeled and visualized a relationship between COVID-19 outcomes and Vitamin D levels across age, race, and gender groups in R from vast TriNetX data set and subsequently co-authored a research paper

Castle Ventures Corporation

Newark, NJ

Cyber Security Analyst & Software Developer

Jun 2020 – Jun 2021

- Designed PowerShell & R script to obtain and visualize top ten daily failed authentications
- Wrote PowerShell script to identify and fix dozens of broken links when moving files across servers
- Created PSQL database in AWS environment to hold client server info and built React Django website for data input

Engie North America, Genbright LLC

Hingham, MA

Software Engineer Intern

May 2019 – Aug 2019

- Developed backend Python and PSQL code to access, obtain, store daily power plant reports, and conduct EDA
- Visualized yearly trends and displayed linear regression model calculating optimal buy and sell times in React web app

PROJECTS

Personal Travel Tracker Website

- Created a React Django website with a clickable scratch off inspired world view illustrating counties I have visited, which pulls in SQL data for each country highlighting time visited, company, pictures, in country travel, and more trip details

Receipt Recognition and Financial Tracker

- Implemented an OCR model to read in grocery store receipts and pull individual items and prices into a SQL table
- Analyzed trends in purchases and costs over time to help with budgeting and track impacts of inflation in Python

Capstone Computer Vision System

- Implemented a computer vision model for aerial object marking using ML through the YOLO algorithm
- Parallelized with GPU to improve run time and added a Kalman Filter for object recognition, tracking, and counting

Parallel K-means Algorithm

- Parallelized Lloyd's K-means algorithm in C using OpenMP and MPI on compute clusters to study parallel scaling

EDUCATION

Virginia Tech

Blacksburg, VA

B.S. Computational Modeling and Data Analytics – Biological Sciences Concentration

SKILLS

Python, R, SQL, PSQL, Java, C, C++, Tableau, JavaScript, HTML, CSS, Django, Flask, React, Angular, MATLAB, Git, Unix Emacs, PowerShell, SAS, Cuda, MPI, OpenMP, OpenCV, Microsoft Office, Adobe Photoshop and Illustrator

Adaptable ❖ Curious ❖ Persistent