John Walsh

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EXPERIENCE

Associate Analyst/Engineer
Aug. 2024 - Nov. 2024

SciTec Inc, Boulder, CO (Hybrid)

- Worked on a six member analyst agile team in a Linux Dev Environment
- Contributed to library code employing modern DevOps/CICD pipelines
- Built interactive 3D visualizations to verify the behavior of simulated trajectories produced using Python and MATLAB
- Contributed to projects that asynchronously read and analyzed logging outputs from C++ code and implemented proprietary algorithms to make decisions for customers
- Used Linear Algebra techniques to apply spatial transformations to simulated data
- Implemented Test Driven Development (TDD)
- Built Dash prototype to display algorithm output for customer demos

Data Science Fellow
Sep. 2023 - Dec. 2023

The Data Incubator (Remote)

- Achieved >90% on all assignments
- Built ML models for image processing, sentiment analysis, and regression

Capstone Project: Ingredient Identifier

- ➤ Built a deployable web application with Streamlit in Python, capable of identifying food products registered with the USDA that match user-specified criteria (ingredients or additives)
- ➤ The application queried a personally owned and maintained PostgreSQL database upon user request and produced hierarchically directed acyclic graphs to display query results
- ➤ The resultant visualization allows users to find food products they want to incorporate into their diet

Business Analyst Intern
May 2022 - May 2023

24/7 Software, Boca Raton, FL (Hybrid)

- Built proof of concept ML model and data visualization capabilities to utilize previously unused customer data
- Frequently presented my findings and results to a Senior Product Manager and other Senior Leadership

Senior Thesis: Spatiotemporal Determinants of Football Stadium Incidents (2023)

- ➤ Cleaned raw Stadium Incident Data (>1G), built regression models, and performed classification using Apriori Association Rules Mining (ARM) to analyze the spatiotemporal determinants of football stadium incidents
- ➤ Visualized likelihood of incidents occurring in various stadium locations during various times
- ➤ Results elucidated operational inefficiencies particularly related to security incidents and ADA accessibility requests
  https://github.com/jrw34/ThesisJW_PDF/blob/main/JW_Thesis_pdf2.pdf
- ➤ For example, it was determined that 25.6% of accessibility requests occurred when the stadium gates opened. Also found that 9% of fan code of conduct violations occurred in a specific section of the stadium during the 2nd quarter.

SKILLS

- DevOps
- Linux
- Data Visualization
- Machine Learning
- NLP / Text Processing
- Image Processing
- ETL Pipelines
- Python Static Typing
- Documentation
- Probability Theory
- Hyperparameter Tuning
- Regex
- SQL
- Data Mining
- Logging
- Linear Algebra
- Functional Programming
- Object-Oriented Programming
- Remote Sensor Data

TOOLS

- JIRA
- Python
- Apache Spark
- Tensorflow
- Plotly
- Bash
- GitLab
- Ruff
- MyPy
- Dash
- Streamlit
- IntelliJ
- VS Code
- JupyterLab
- MATLAB

EDUCATION

Wilkes Honors College of Florida Atlantic University

Interdisciplinary Mathematical Sciences, B.A.

CERTIFICATIONS

The Data Incubator
Completed the Data Science Fellowship Program

AWARDS

Outstanding Thesis Award
"Spatiotemporal Determinants of Football Stadium Incidents"