APRIL WALKER

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WORK EXPERIENCE

Jr. Machine Learning Engineer

Black Sky

Sept. 2020 - Present Herndon, VA (Remote)

- Used supervised and unsupervised computer vision techniques on satellite imagery in conjunction with compartmental mathematical modeling to predict events of interest.
- Applied clustering techniques from Scikit-learn on geospatial data to automatically determine regions of interest.
- Trained new pixel segmentation and object detection models utilizing various CNN frameworks in Python.
- Developed various time series visualizations and analyses related to trend and anomaly detection.

Machine Learning Consultant

CopiedCode

Dec. 2019 - Sept. 2020 Fayetteville, AR (Remote)

- Determine and communicate potential use cases and limitations of machine learning models.
- Develop predictive models both for clients and internal use.

Data Science Intern

The Hartford

May 2019 - Aug. 2019 Hartford, CT

- Collaborated on "Proof of Concept" utilizing Python and the H2O.ai Framework to determine the predictive power of third party datasets.
- Developed R and Python codebase to explore and compare the performance of dimension reduction and feature selection techniques. The project utilized PySpark, Hadoop, Jupyter, and H2O.ai.
- Managed resources on cloud infrastructure
- Lead peer workshops to teach and discuss data science concepts

RESEARCH EXPERIENCE

University of Arkansas

Fayetteville, AR

Oct. 2018 - Aug. 2019

Dr. Cheng's Climate Science Lab

- Utilized various statistical inference methods with a focus on the Bayesian approach to predict extreme temperature events with nonstationary models in R.

Aug. 2016 - Dec. 2018

Dr. Lehmer's Astrophysics Lab

- Participated in various collaborative and personal projects related to x-ray binary research.
- Utilized Python, Bash, Tcl, and R in conjunction with astronomical software (CIAO, XSPEC, DS9) to process, analyze, and visualize data.

EDUCATION

University of Arkansas

Fayetteville, AR

Master of Science

August 2020

- Field: Statistics and Analytics
- GPA: 3.824
- Relevant Coursework:
  - Machine Learning
  - Natural Language Processing (NLP)
  - Computational Statistics
  - Numerical Analysis

Bachelor of Science

May 2018

- Major: Physics
- Concentration: Computational Physics
- Minor: Mathematics

SKILLS

Programming Languages

Python, ***R***, ***C/C++***, SQL (MySQL), JavaScript, MATLAB, Java, Scala

Big Data/ ML Technologies

Scikit-Learn, ***Keras***, H2O.ai, TensorFlow, OpenCV, PyTorch, Hadoop, Spark

ML Algorithms and Concepts

Computer Vision, ***Neural Networks*** (***CNNs***, RNNs, LSTMs, MLPs), ***Time Series Analysis***, ***Anomaly Detection***, Compartmental Models, GLM/Regression, GBMs, Boosting, Clustering, Trees, Naive Bayes, Scenario Testing, Sentiment Analysis, Text Mining

Other Computer Skills

GNU/Linux, Jupyter, Bash/Shell, Git, QGIS, Vim, AWS