

Jay Shapiro

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Website: www.onecalledsyn.github.io

EDUCATION

University of Virginia

Bachelor – Physics

Aug 2012-

May 2016

University of Colorado Boulder

Master of Science – Data Science

May 2021-

GPA: 3.97

Related Courses

Computer Sci: Algorithms, Data Structures, Computer Vision, Cybersecurity, Scientific Computing, Databases

Data Sci: Modern Regression Analysis, Experimental Design, Data Visualization, Probability Theory, Statistical Inference

Math: Discrete, Real Analysis, Differential Equations, Advanced Linear Algebra, Stochastic Processes, Multivariate Calculus

WORK EXPERIENCE

Software Developer – DC Energy (Vienna, VA)

Dec 2021 – Present

- Implemented Python-based web crawlers/spiders to scrape various data sources for internal modeling and analytics
- Performed data cleaning with PHP on scraped XML/JSON/CSV/XLS files to meet technical specifications for ingestion
- Handled MySQL schema design, normalization, table creation, and indexing to ensure performant data storage and retrieval
- Improved company monitoring capabilities by adding functionality to internal Alerta-Slack integration

Service & Support Engineer – B&W Tek LLC (Newark, DE)

Dec 2017 – Mar 2020

- Demonstrated how multiple proprietary software programs could revamp their implementation of graphical analysis
- Investigated internal cutting-edge classification algorithms to identify limitations and suggest improvements
- Assisted with hiring, interviewing, and training of multiple incoming junior service engineers
- Performed testing, troubleshooting, documentation, and repair on software for numerous optical device configurations
- Maintained responsibility for final quality control checks and customer communication and satisfaction
- Started as a production technician and quickly promoted up to engineer role after several months

PROJECTS

Supervised Classification of Nitrates at NIR Wavelengths

- Utilized Principal Component Analysis to separate spectral data of nitrate compounds at 785nm and 1064nm LEWs
- Implemented interactive 3D visualization of PCA scores and confidence ellipses to understand and resolve incongruous results for new proprietary classification algorithm

SIMCA Implementation in Chemometric Analytic Software

- Created a professional report explaining the underlying mechanism of SIMCA and how to display useful graphical and statistical analysis to address customer requests for improved SIMCA capabilities in proprietary BWIQ software

Professional Capture the Flag Data Visualization

- Interactive visualization of elite players' statistical performances over several seasons of competitive play
- Created a master dataset by scraping, manipulating, cleaning, and amalgamating available raw data files

Image Recognition of Game Elements

- Created a data set from scratch by trimming images from different texture packs to a standardized pixel size to make a suitable training set for a deep convolutional neural network
- Allows texture pack creators to verify specific items have sufficient visual clarity for differentiation purposes

TECHNICAL ABILITIES

Languages: Python, SQL, R, HTML, CSS, PHP, Javascript, Java

Tools: MySQL, Jira, Linux, Google Cloud Platform, Git, Flask, Spark, Tableau, Tensorflow, Plotly, Jupyter, Shiny

Skills: Data Visualization, Machine Learning, Modeling, Statistics, AI, Teamwork, Communication, Problem Solving,

Data Mining, Programming, Debugging, Testing, Web Development, Full-stack Development, Learning

FURTHER EDUCATION

Coursera

May 2020 – Present

- Completed 36 CS + data science courses and earned an A grade and certificate for each

DataCamp

Sep. 2019 – Present

- Completed 42 courses and 10 projects in data science
- Mastered 'Data Scientist', 'Machine Learning Scientist', and 'SQL for DBAs' skill tracks