

Nathaniel Burley

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PROFESSIONAL SUMMARY

Inquisitive and experienced machine learning engineer with a proven record of leveraging cutting-edge technologies to create innovative solutions to the most challenging data problems.

EXPERIENCE

Machine Learning Engineer | Headspace

FEBRUARY 2022 - PRESENT

- Designed and implemented a machine-learning powered notification system by developing models to personalize the type and channel of messages. Conducted multiple A/B tests to quantify the results, leading to a 10% boost in engagement through increased relevance
- Constructed a random forest model to identify potential high-stress users based on content consumption and app engagement features for intervention from the clinical research team
- Built a custom data pipeline with Spark to clean and ingest several terabytes of raw, semi-structured data from the delta lake into the feature store, doubling the amount of features available for model training and inference
- Created a Tableau dashboard to identify anomalies in key metrics and prevent model drift in production with a custom segmentation model and Bollinger bands

Data Analyst | Kochava

JUNE 2021 - FEBRUARY 2022

- Provided strategic guidance to clients by conducting analyses on a variety of aspects of mobile marketing, including user engagement, event forecasting, and advertising fraud and network anomaly detection to quantify the effectiveness of digital ad campaigns
- Distilled complex data into comprehensible visualizations to provide clients with actionable intelligence to ensure optimal marketing impact and efficient measurement
- Saved a major broadcasting corporation millions of dollars by identifying anomalies in geographic data and IP addresses indicating ad spend being lost to fraudulent installs from click farms

Data Science Consultant | Super 1 Foods

SEPTEMBER 2019 - MARCH 2020

- Built and deployed an FPGrowth model in Databricks to perform market basket analysis and identify frequently purchased itemsets, providing insights into purchasing patterns for Super 1 Foods

Undergraduate Research Assistant | WSU Scalable Algorithms for Data Science Laboratory

JANUARY 2019 - MAY 2021

- Researched Generative Adversarial Neural Networks (GANs), and the generation of synthetic medical time series data. Used Python (TensorFlow, Numpy, SciPy, Keras) to construct deep learning frameworks and evaluate synthetic data. Submitted results for publication in an ACM journal
 - Analyzed the effectiveness of adding a Transformed Bellman Operator to the Asynchronous Actor Critic reinforcement learning algorithm
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EDUCATION

B.S. Applied and Computational Mathematics | Washington State University

- Double major in Philosophy. Minor in Computer Science
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SKILLS

Certifications

- AWS Machine Learning Certification | Amazon Web Services (2022)

Languages

- Python (TensorFlow, SciKitLearn, Numpy, Pandas, PySpark), SQL (PostgreSQL, MySQL), C++