Jake Brehm

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Education

University of Rochester   Rochester, NY, USA
MS in Data Science   Jun 2022 - May 2023
GPA: 4.00/4.00
  Relevant coursework: Tools for Data Science, Database Systems, Computational Statistics, Data Mining, Data Science at Scale, Statistical Machine Learning, Network Science Analytics, Data Science Capstone & Practicum

Clarkson University   Potsdam, NY, USA
BS in Mechanical Engineering, Minor in Mathematics   Aug 2014 - May 2018
GPA: 3.84/4.00, with great distinction 🔗
  University of Leicester, study abroad (2 semesters)   Sep 2017 - May 2018
  University of Technology Sydney, study abroad (1 semester)   Mar 2016 - Jun 2016

Projects

Specialty Referral Network 🔗   Jan 2023 - May 2023
- Accentuated convolutions in UR Medicine's speciality referral network using *networkx* and *plotly*.
- Embedded the visualization into a *Flask* web app for additional customizability and layperson accessibility.
- Defined aesthetic parameters and custom efficiency metrics to determine where bottlenecks occur.

NYC Citibike Inventory Tracker   Jan 2023 - May 2023
- Engineered a data-intensive application to track Citibike bike sharing inventory and weather in NYC.
- Built an immutable *PySpark* ETL pipeline to extract and refine data from various sources, including APIs.
- Forecasted hourly net bike change using *Prophet* and registered staging and production models using MLflow.

European Tweet Classification 🔗   Jan 2023 - Feb 2023
- Determined the ideologies of politicians with ∼78% accuracy by analyzing multilingual tweets.
- Incorporated feature engineering techniques and a logistic regression model into an NLP pipeline.

Experience

Horizon Health Services   Getzville, NY, USA
Data Engineer   Jun 2023 - Present
- Strategizing with stakeholders and interdisciplinary team regularly using Agile principles.
- Building, testing, and maintaining ETL and data pipeline architectures using SQL and Python.
- Incorporating modern software practices including Git version control and scalable architectures.
- Spearheading development and maintenance of a data warehouse specifically designed for testing.

Virufy   Remote • San Francisco, CA, USA
Associate Data Scientist   Jan 2023 - Present
- Collaborating with fellow volunteers to employ an AI that detects COVID from cough audio signals.
- Generating 100,000+ synthetic coughs using GANs to mitigate class imbalance in training data.
- Evaluating the diversity and quality of the synthetic data relative to real data using Inception Score.

Viewpoint Systems Inc.   Buffalo/Rochester, NY, USA
Systems Engineer   Apr 2020 - Jun 2022
- Obtained 8 LabVIEW certifications covering advanced software architecture techniques.
- Conceived and supported a version of automated test software that runs without hardware.
- Delivered software that validates electrical functions of spacecraft thrust vector control systems.

Young & Franklin Inc./Tactair Fluid Controls Inc.   Liverpool, NY, USA
Development Engineer, Development Engineering Intern   Aug 2018 - Jan 2020
- Automated control and testing of a digital motor controller, used by a team of 6.
- Launched software that allows for viewing and manipulating multiple sets of data simultaneously.
- Produced computer vision software that measures oil leakage with >90% accuracy using *OpenCV*.

Skills

Python • R • SQL • SAS • Databricks • Spark • Pandas • Matplotlib • Seaborn • Plotly • Git • scikit-learn • PyTorch • AWS