

Jake Brehm

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Education

AWS Certified Cloud Practitioner

Jun 2024

University of Rochester

Rochester, NY

MS in Data Science, GPA: 4.00/4.00

Jun 2022 - May 2023

Clarkson University

Potsdam, NY

BS in Mechanical Engineering, Minor in Mathematics, GPA: 3.84/4.00

Aug 2014 - May 2018

Skills

Languages

Python
JavaScript

Databases

SQL (SQL Server, MySQL)
NoSQL (Firestore)

Engineering

Cloud (AWS)
Tableau, Power BI

Miscellaneous

Agile (Jira)
Git (GitHub)

Experience

Horizon Health Services

Remote • Getzville, NY

Data Engineer I, Data Engineer II

Jun 2023 - Present

- Construct and maintain scalable data pipelines using *Python* and *T-SQL* in an agile environment.
- Communicate with stakeholders and IT to translate diverse, complex business problems into robust data solutions.
- Orchestrate ETL processes using cron jobs to support data refresh of 200+ reports serving nearly 1200 users.
- Ported 20+ *C#* .NET API endpoints to *Python*, improving pipeline reliability and reducing execution time by 90%.
- Extracted themes from 15 patient surveys using machine learning (topic modeling and sentiment analysis) and presented a business-orientated interpretation of the results to audiences of varying technical proficiency.
- Championed machine learning initiatives and company-wide data literacy to foster a data-driven environment.

Virufy

Remote • San Francisco, CA

Associate Data Scientist • Volunteer

Jan 2023 - May 2023

- Trained machine learning models on *AWS SageMaker* using data stored both locally and in S3 buckets.
- Generated over 100,000 synthetic audio files using GANs to mitigate a 1:3:3 class imbalance in training data.
- Achieved a 4.49 inception score, indicating the generated audio was high quality and similar to the training data.

Viewpoint Systems Inc.

Buffalo/Rochester, NY

Systems Engineer

Apr 2020 - Jun 2022

- Communicated with the client to scope and quote new projects, as well as collaborate on existing projects.
- Obtained 8 certifications covering software engineering best practices, scalable architectures, and design patterns.
- Validated spacecraft system functionality programmatically and led demonstrations for stakeholders.

Young & Franklin Inc. / Tactair Fluid Controls Inc.

Liverpool, NY

Development Engineer

Aug 2018 - Jan 2020

- Ensured aircraft compliance by producing computer vision software to measure oil leakage with >90% accuracy.
- Automated 30+ hour feature testing of a product, saving 100s of man hours yearly by eliminating repetitive tasks.
- Launched custom data visualization software, allowing for interactive collaboration with stakeholders.

Projects

Afloat

Aug 2024 - Present

- Developing an unreleased iOS application using *Swift* to manage and visualize cash flow.
- Integrating a *SwiftUI* front end with a *Firebase Firestore* back end to display and manage data for 30+ beta testers.

ManyMiles

Nov 2023 - Jul 2024

- Created a full stack web application (*Flask*, *JavaScript*, *MySQL*) for tracking and visualizing vehicle mileage.
- Incorporated a secure REST API comprised of 5 endpoints, allowing users to add, modify, or delete records.

Citi Bike Inventory Tracker

Jan 2023 - May 2023

- Engineered an end-to-end application in *Databricks* to track Citi Bike inventory and weather in New York, NY.
- Built an immutable *PySpark* streaming data pipeline to extract, transform, and load data from various APIs.
- Forecasted hourly net bike change using *Prophet* and registered staging and production models using *MLflow*.