Zack Drescher

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Freelance Software Engineer and Data Scientist. Driven to develop software capabilities that have a positive impact on people's lives and to make understanding of these capabilities available to all. *Seek first to understand.*

EXPERIENCE

Summery Inc, San Francisco, CA — *Software Engineer*

September 2021 - Present

Working as a contract Software Engineer to maintain and develop Summery's software product. Maintaining and updating VueJs and NodeJs apps that run Summery's product as well as data engineering and management to keep things running smoothly.

Mosaic Data Science, Leesburg, VA— *Data Scientist*

November 2019 - August 2021

Worked as a Data Science Consultant for a variety of commercial and government clients. Helped design and implement various data solutions for customers across a wide range of industries including Pharmaceuticals, Healthcare, Energy Utilities and Pet care. Additionally supported proposal development for government research grants issued by the DoD and NASA. Supported remotely from my home in New York.

Steelcase Inc., Grand Rapids, MI — *Senior Advanced Analyst*

May 2016 - November 2019

Worked on Applied Data Science, a group in Steelcase IT tasked with delivering and developing analytics capabilities. Specifically, I focused on our workplace IoT platform and Marketing Analytics initiatives. Started supporting remotely from New York in May 2019.

EDUCATION

Grand Valley State University, Allendale, MI — *Bachelors of Science*

September 2012 - May 2017

Majored in Statistics with minors in Computer Science and Data Science

SKILLS

Vast software engineering experience with **Python, R, JavaScript, Unity C#, bash, powershell, Git, Azure, AWS, Heroku, Azure DevOps, Jenkins, Docker, SQL, Spark** and **Hadoop.**

Experienced in **data engineering, visualization, machine learning, deep learning, computer vision, NLP** and **model deployment techniques.**

ACHIEVEMENTS

Speaker and Organizer at the **Big Data Ignite** conference.

Wrote *Cloud Development Guides*, a series of guides for helping data scientists approach developing their code to run on various client controlled computing environments.

Implemented, wrote and delivered a **live sales demo** demonstrating **Model Deployment, Testing** and **Monitoring** capabilities using **Jenkins** and **MLFlow** to assure the ethical quality of a model.

PROJECTS

GreenHouse Gas Estimation and Optimization — *Data Scientist and Engineer*

Implemented backend data engineering pipelines for a GreenHouse Gas Estimation and Optimization Dashboard used by an Energy Utility to help customers select renewable energy products to get the largest carbon reduction for the lowest cost.

Trajectory Estimation System — *Data Scientist and Engineer*

For a phase 1 DoD SBIR designed and implemented a machine learning component to be used in Situational Awareness Systems on Navy ships. The probabilistic spatial temporal model was used to estimate the future trajectory of an aircraft based upon its previous trajectory and other information that could be collected. Deployed as a streaming inference component that integrated with existing visualization software.

Weather Event Detection System Proposal— *Lead Data Scientist*

Lead the design of a weather event detection system for a NASA SBIR grant. Designed a temporal-spatial model for estimating the presence and location of discrete weather events using high resolution atmospheric measurements from the NASA GEOS data product.

Real-Time Presence Estimation — *Lead Modeler*

Design algorithms for presence reporting in near real-time applications. Evaluate accuracy of previous models. Defined framework for mining features out of sparse sensor data.

Model Development Platform — *System Engineer and Developer*

Helped select and implement *Azure Machine Learning Services* and *Azure Databricks* as a platform for training and deploying models. Collaborated with Infrastructure and DevOps teams and delivered results and implications to stakeholders. Wrote documentation and tutorials for leveraging the platform as well coaching new users to use it.

Quote Automation NLP System —*Lead Modeler*

Parse and tokenize raw text into a representation for a language model that leveraged Latent Semantic Indexing and a Multi Task Neural Network to classify types of engineering required for custom furniture solutions.

REFERENCES AVAILABLE UPON REQUEST

Volunteered providing reading tutoring for first graders and cleaning Grand Rapids.

Worked in many roles on **Agile** teams including Developer, Analyst and Product Owner.

Dean's List 7 out of 8 semester at GVSU.