Zack Drescher

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.*

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EXPERIENCE

Federal Signal, Oak Brook, IL — *Data Scientist*

May 2022 – Present

Working as a contract Data Scientist to develop Advanced Analytics applications for a Connected Vehicle and Equipment Platform. From initial data model design and data preprocessing to designing, implementing and evaluating algorithms for synthesizing data feeds from multiple sensors into an understandable metric of a vehicle's operational status.

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, December 2021 – Present

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, Car Wash and Pet care. Additionally supported proposal development for government research grants issued by the DoD and NASA. Continued support as a subcontractor.

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.

SKILLS

Vast software engineering experience with **Python, R, NodeJS, VueJS, Unity C#, Tensorflow, 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, algorithm design** and **model deployment techniques.**

ACHIEVEMENTS

Founded game development studio **Wiggle Room Games**

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

Work **published and presented** at **2021 IEEE DASC 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.

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

PROJECTS

Car Wash Automated Guidance and Safety System — *Data Scientist and Engineer*

Took a Computer Vision system for guiding vehicles onto a car wash conveyor from proof of concept to production application. Leveraged docker for standardizing application distribution, implemented interface to multiple downstream devices including digital signage and tunnel controller for emergency stop.

Green House 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*

Designed and implemented a machine learning component to be used in Situational Awareness Systems. The probabilistic spatial temporal model was used to estimate the future trajectory of an aircraft based upon its previous trajectory. Deployed as a streaming inference component that integrated with existing visualization software.

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.

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

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.

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.