# **BRANDON SAMS**

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Data Scientist with strong traffic signal modeling skills and a passion for creating solutions to improve transportation.

# **PATENTS**

#### DERIVING TRAFFIC SIGNAL TIMING PLANS FROM CONNECTED VEHICLE TRAJECTORY DATA

- Developed software that would aggregate historic GPS vehicle data and build models of traffic signal behavior.
- Reduced dependency on parter data being recieved from Advanced Traffic Management Systems
- Tripled the count of traffic signals being modeled in the United States
- US Patent No. US-20230013604-A1, Publication Date: 2023-01-19

## CAREER EXPERIENCE

**Traffic Technology Services**: 2018 - 2023

#### **R&D Data Scientist Supervisor / Scrum Master**

**September 2020 - July 2023** 

- Designed, implemented, and documented an automated data pipeline for traffic signal model generation.
- Managed Big Data pipelines with performance in mind, such as with a dataset that grew by 2TB/day.
- Utilized unsupervised machine learning (EP-Means) to cluster circularly distributed statistical data.
- Developed automated system for monitoring prediction quality against user experience.
- Worked with domain experts to incorporate their feedback into predictive models
- Led Agile/Scrum processes for R&D team, including standup, sprint planning, and retrospectives.
- Utilized data cleaning methods to ensure model input is complete, accurate, consistent, and uniform
- Promoted a culture of transparency, trust, and continuous improvement with communication and leadership skills.

## **DevOps Engineer**

August 2018 - September 2020

- Provided API support for partners and clients using our predictions in their CV2X/Autonomous Vehicles use cases.
- Worked with partner agencies to establish traffic signal connectivity for internal data pipeline
- Managed production rollout of new internal software releases, including installation and bug reporting.

ECS Federal: May 2023 - Present

## Senior Data Analyst (VA Profile)

May 2023 - Present

- Acquired technical domain knowledge and system expertise to construct enterprise data lineage as an effort to facilitate effective data governance for any and all demographic data.
- Collected contact information for VEO Comms Annual Sexual Harassment campaign, which saved the Department of Veterans Affairs \$1.68M in printing and postage by prioritizing contact via email.
- Quickly fulfilled high-priority, large volume data requests in the event of natural disasters for VEO Comms Team.
- Accelerated turn-around times (from weeks to minutes) and increased data autonomy by designing, implementing, and maintaining self-service contact information dashboard.

#### **Power Platform Developer (Enterprise Measurement and Design)**

**April 2024 - Present** 

• Developed full-stack Power Platform solution for VEO/EMD Intake Portal, Skills Inventory, and Capacity Management System, which unified workstream across all divisions in Enterprise Measurement and Design.

#### **SKILLS**

- Well versed with SQL and Python for data engineering, analysis, and communication
- Data Visualization: Grafana, PowerBI, Tableau, R
- Excellent ability to work cooperatively in a fast-paced, dynamic team environment.

## **EDUCATION**

Master of Science in Data Science, Bellevue University (3.80 GPA)

2019 - 2021

Bachelor of Science in Mathematics w/ Minor in Communication, Boise State University (3.59 GPA)

2013 - 2017

- 2-Time National Champion for Pi Kappa Delta Competitive Speech and Debate
- Honors College Graduate