BRANDON SAMS

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Data Scientist with experience modeling large scale infrastructure, and working on a research and development team.

EDUCATION

Master of Science in Data Science, Bellevue University   **2019 – 2021**

- 3.800 GPA

Bachelor of Science in Mathematics with Minor in Communication, Boise State University   **2013 – 2017**

- 2-Time National Champion for Competitive Speech and Debate
- 3.59 GPA
- Honors College Graduate

Valedictorian, Mountain Home Senior High School   **2009 – 2013**

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 - Present

Data Scientist Supervisor / Scrum Master   **September 2020 - Present**

- 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 of drivers near traffic signals
- 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
- Promoted a culture of transparency, trust, and continuous improvement with communication and leadership skills

DevOps Engineer   **August 2018 - September 2020**

- Provided API support for clients using our predictions in their CV2X and Autonomous Vehicle Applications
- Worked with agencies to establish connectivity to TTS's on-prem cloud hardware and software
- Developed and implemented quality control metrics for traffic signal predictions against incoming status data
- Managed production rollout of new internal software releases, including installation and bug reporting
- Windows Server system administration using PowerShell to manage hundreds of servers at a time
- MySQL database administration, including backups, load distribution, and cloud application configuration

SKILLS

- Object Oriented and Functional Programming: C#, Python
- Data Visualization: Grafana, PowerBI, Tableau, R
- Scripting: Windows Powershell, Bash, Jupyter Notebooks
- Operating Systems: Confident with software development on/for Linux, Windows, and macOS
- Network tracing: Wireshark
- Strong writing, documentation, and speaking skills especially with regard to Agile
- Ability to work cooperatively in a team environment
- Confident with the Microsoft Office Suite of tools, such as Sharepoint, Dynamics, Flow (Power Automate), Excel

References are available upon request.