# **Wesley Alexander Osborne**

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# **Objective**

I am a Software Engineer who is passionate about solving real-world problems and developing elegant solutions. My experience as a software engineer, data scientist, and technology consultant allow me to effectively break down complex technical solutions and communicate them to stakeholders. Working in an agile development environment I am passionate about code quality, maintainability, and testability.

## **Skills and Tools**

- Languages: TypeScript / JavaScript, Python, SQL, HTML, CSS
- Databases: PostgresSQL, MongoDB, MySQL, Google BigQuery
- Libraries: Node.js, React.js, Redux, Jest, Pandas, Numpy, Matplotlib, Seaborn, Scikit-Learn, Tensorflow, Keras, Statsmodels
- **Tools:** Jupyter Lab/Notebook, Tableau, Streamlit, Flask, AWS, Git, Spark, Databricks, Google Colab, JIRA, Confluence, Figma
- Other/working knowledge: Swift, Microsoft Office (Word, Excel, Powerpoint), Slack, Zoom, Docker, Agile Software Development, C++, Salesforce

# **Work Experience**

# **Software Engineer**

Tulip Interfaces | August 2022 - Present

- Transitioned from Data Scientist to Software Engineer to aid in the deprecation of Tulip's old charting framework
  to a new one while maintaining backwards compatibility during the roll out. This increased the usage of the
  analytics platform by more than 40%.
- Worked in an agile software development cycle across teams such as Product, Design, and Quality Assurance.
- Owned and implemented the UI and unit tested integration of ML features to key add-on features for the Tulip analytics platform, i.e. control charts, forecasting, trend lines, and reference lines. These features are used by more than 30% of Tulip's users.
- · Conducted interviews for new hires

#### **Data Scientist**

Tulip Interfaces | February 2022 - August 2022

- Implemented a python backend inference service to integrate machine learning into the Tulip analytics platform.
- Implemented forecasting and kernel density estimation into the Tulip analytics platform.
- Conducted research on customer usage of features in the analytics platform to aid in deprecating legacy features pulling in various data sources from Postgres and MongoDB.

#### **Technology Consultant**

Paytronix Systems, Inc I January 2019 - April 2020

- Managed planning, implementing, and troubleshooting, loyalty, gift, and comp programs for 250+ small/medium/ enterprise sized restaurant businesses across various POS systems, solving 750+ cases.
- · Led technical training workshops for new hires.
- Stepped up to assist in creating, testing, and deploying email and guest website modifications for clients using Javascript, jQuery, HTML/ CSS.

 Aided in transferring Paytronix API documentation into a dedicated API testing suite using Postman for the technical team.

# **Projects**

Video Game Sales Prediction (Pandas, Numpy, Matplotlib, Seaborn, AWS, Scikit-Learn)

- Using 16,000 rows of sales and Metacritic game data, conducted exploratory data analysis to find and extract trends related to global sales. Cleaned and transformed over 8,000 rows of data to prepare for modeling.
- Trained and evaluated Random Forest, Linear Regression, and XGBoost models to predict global sales of video games. (See Project on GitHub).

## Convolutional Neural Network Capstone (TensorFlow, Keras, Pandas, Numpy, Matplotlib)

- Stretched myself, dove into the research papers, implemented ResNet, InceptionNet, and VGG16 computer vision architectures from scratch.
- Tested and evaluated the pros and cons of each architecture against a reduced dataset of the MIT Indoor Scene dataset. Wrangled additional 500 images to balance out the 11 classes used to have a total dataset size of approximately 7,000 images (See Project on GitHub).

#### Subreddit NLP Classification (Scikit-Learn, Pandas, Numpy, Matplotlib, Seaborn)

- Wrangled over 8,000 reddit posts across two subreddits using the <u>Pushshift Reddit API</u>. Performed data cleaning and analysis searching for word count, character length, and the top 10 words across posts for both subreddits.
- Used natural language processing techniques such as CountVectorizer and TF-IDF Vectorizer to train and evaluate Random Forest and K-Nearest Neighbors models. Was able to classify which subreddit posts originated from based on the title and self-text with over 96% accuracy (<u>See Project on Github</u>).

#### Dementia Image Classification (TensorFlow, Keras, Pandas, Numpy, Matplotlib, Git)

- Led a team of two data scientists to predict whether patients had dementia and to what severity based on MRI images of brain scans.
- Built and trained convolutional neural networks from scratch to classify the severity level of dementia with above 72% accuracy (See Project on Github).

## **Education**

Data Science Immersive

General Assembly I October 2021

B.S. in Computer Science & Business, minor in Entrepreneurship

Lehigh University | December 2018