Leon Zhang

Machine Learning Engineer

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Summary of Qualifications

Programming Languages: Python · Java · SQL · R · MATLAB · C++ · JavaScript · HTML · CSS

Software Tools: ML (Sklearn, PyTorch, TensorFlow, Keras, Hugging Face) · Cloud Computing (AWS, Azure, GCP) · Git · Docker · ETL (Spark, MapReduce, Snowflake, RapidMiner) · CI/CD · Flask · Visualization (Tableau, Grafana)

Skills: Machine Learning · Deep Learning · Natural Language Processing · Statistical Modeling · Data Engineering · Database Management Systems · Data Structures · Algorithms · Data Visualization · A/B Testing

Certifications: AWS Certified Solution Architect – Associate [Credentials]

Education

Duke University, Durham, NC **Aug. 2020 – Apr. 2022**

Master of Science, Data Science (MIDS) Overall GPA: 3.78/4.00

• Duke Interdisciplinary Product Management Club: Co-Founder, [SQL Workshop Speaker]

University of Washington, Seattle, WA **Sep. 2016 – Jun. 2020**

Bachelor of Science, Chemical Engineering Overall GPA: 3.55/4.00 Computer Science GPA: 3.76/4.00

Professional Experiences

Data Science Intern, Windstream – Durham, NC (Remote) **May. 2021 – Aug. 2021**

• Improved chatbot customer services with transformer-based sentiment analysis models using PyTorch.

• Established REST API endpoints of deep learning models for cross-functional usage including chatbot and KPI dashboards.

• Accelerated customer digital adoption by 30% through communicating insights and building dashboards on user activities, remedy tickets, IVR routing, and customer satisfaction using SQL, Python, statistical modeling, and Grafana.

ML Software Programmer, Duke Health System – Durham, NC **Jan. 2021 – Present**

• Assist doctors in finding targeted cancer treatment through implementing clustering algorithms using Python and R.

• Formulated a new algorithm that produces symptom-patient block clusters after effective communication with stakeholders on the research goal.

Research Assistant, University of Washington – Seattle, WA **Jan. 2019 – Jun. 2020**

• Devised a variational autoencoder with the research team to explore chemical reaction pathways and predict intermediate chemical species using TensorFlow, NumPy, and Pandas.

• Implemented rotational techniques with quaternion coordinate system to visualize molecule interactions in Python and C++.

Projects & Competitions

Reinforcement Learning for Algorithmic Stock Trading [Link] **Sep. 2021**

• Develop trading strategies from deep reinforcement learning algorithms using PyTorch and StableBaseline3.

• Designed a simulated trading environment that provides reinforcement learning algorithms with feedback using OpenAI Gym.

2020 Duke Datathon – 1st Place [Link] **Oct. 2020**

• Collaborated in a team of four in presenting insights of COVID-19 economic impacts and proposing relieves using time-series and regression models in R and Python.

• Built a comprehensive metric using PCA that reflects the economic condition of a country over time to perform modeling.

Movie Recommendation Web Application [Link] **Aug. 2020**

• Launched a full-stack web app on GCP to provide movie recommendations using Python, JavaScript, Flask, HTML, and CSS.

• Automated code testing, deployment, and scaling pipelines through CI/CD practices.