Leon Zhang

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Summary of Qualifications

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

Software Tools and Skills: ML Libraries (Sklearn, PyTorch, TensorFlow, Keras), Git (GitHub, GitLab), Containers (Docker), Spread Sheets (Excel, Google Sheet), Cloud Computing (AWS, Azure, GCP), Continuous Integration & Deployment (CI/CD), Flask Application, Data Visualization Tools (Grafana), Data Warehouse and Orchestration (Snowflake, RapidMiner).

Relevant Coursework: Machine Learning, Statistical Modeling, Natural Language Processing (NLP), Data Engineering Systems, Database Management Systems, A/B Testing, Linear Algebra, Data Structures, Algorithms, Probability.

Certifications: AWS Certified Solution Architect – Associate [Credentials]

Professional Experiences

Data Science Intern, Windstream. **May. 2021 – Present**

• Facilitated proactive live customer services through customer sentiments by building, training, and packaging NLP transformer models for chatbot system in PyTorch.

• Generated business insights by building visualization dashboards on user activities, remedy tickets, and system message errors using Snowflake, Python, RapidMiner, and Grafana.

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

• Assist doctors to find effective treatment solutions through developing Bi-Clustering algorithms in matching patient demographics with cancer symptoms in R and Python.

Research Assistant, University of Washington Jim Pfaendtner's Research Group **Jan. 2019 – Jun. 2020**

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

• Built a training dataset by computing all possible chemical species from reaction pathways using Python libraries including NumPy, Pandas, etc.

• Implemented molecular rotational techniques with quaternion coordinate system in Python and C++ to aid researchers visualize molecule movement in space and study interactions with different interfaces.

Pre-Clinical Research Intern, Chinese Academy of Sciences **Aug. 2018 – Sep. 2018**

• Synthesized tumor targeting Nano drugs for photo-thermal cancer therapy with research group using high-end scientific instruments such as electron microscope.

• Improved drug yield over 300% by reducing clumping, making the synthesis process realistic for large-scale testing.

Education

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

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

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

Projects & Competitions

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

• Collaborated in a team of four and achieved 1st place in finding out the economic impact of COVID-19 across the world.

• Designed a comprehensive metric using PCA that reflects the economic condition of a country over time, aggregating multiple economic indicators including GDP and stock market indices to perform analysis and modeling.

• Presented analysis of what countries are likely to be impacted by the pandemic and made suggestions to help relieve the economic impact using regression modeling and time series forecasting in R and Python.

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

• Designed a visually appealing, scalable web application to provide users with movie recommendations using Flask, Python, JavaScript, HTML, and CSS.

• Integrated Cloud tools from GCP into development cycle to configure continuous integration and deployment for automated code testing and hosting of website.