LEO QIU

Software Engineer/Data Scientist

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EDUCATION

MSc
Computer Science
Georgia Institute of Technology
Aug 2020 - Dec 2023
4.0

MSc
Materials Engineering
University of Alberta
Sep 2016 - Dec 2018
3.9

BEng
Materials Science and Engineering
Jilin University
Sep 2012 - Jul 2016
3.9

SKILLS

- Python
- TypeScript
- JavaScript
- PostgreSQL
- MongoDB
- NodeJS
- PyTorch
- TensorFlow
- AWS
- GCP

WORK EXPERIENCE

Full Stack Software Developer/Data Scientist

True Angle Medical Technologies

Sep 2019 - current

- **Full Stack Development**: Spearheaded the development and deployment of a full-stack web application on AWS which has managed over 280k data entries. This platform emphasized real-time data collection, analysis, and intuitive visual representation, resulting in a 50% increase in user engagement.
- **Data Integration**: Engineered a robust data pipeline, aggregating information from disparate sources and transforming it into a unified format, paving the way for streamlined analysis, saving over 10 hours each week in manual data search
- **Business Intelligence**: Crafted a detailed business intelligence dashboard, delivering actionable insights, catered to the requirements of 100+ customers.
- **Machine Learning Implementation**: Pioneered algorithms for swallow detection and breathing activity classification, achieving an impressive accuracy rate of over 90%.

PROJECTS

Full Stack Web Application

Mar 2020 - current

- Designed the relational database on AWS, tailored to monitor swallow activities, encompassing data from 800 customers
- Crafted a robust web application employing NodeJS for the back-end and Svelte for the front-end, deployed on AWS Elastic Beanstalk
- Implemented an automated testing, ensuring consistent performance and reliability for the web application, saving over 10 hours each week in manual testing
- Designed an ETL system capable of aggregating data from diverse resources. Accentuated the project by developing a QuickSight BI dashboard, empowering business representatives with actionable insights for data-driven decision-making

Machine Learning for Swallow Detection

May 2022 - current

- Architected a robust protocol to acquire and labeled swallowing data, storing it on AWS RDS for accessibility and scalability.
- Performed data wrangling and feature engineering on time series data to develop 25 representative features
- Employed a diverse set of ML algorithms (Logistic Regression, DT, KNN, SVM, NN) targeting swallow detection efficacy
- Implemented the optimal ML algorithm to the iOS app yielding a 35% improvement in swallow detection and 50% increase in processing efficiency