RUYUAN (TRICIA) WAN

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Skills

- Programming: R, Python, SAS, SQL, C++, TensorFlow, Pytorch, MATLAB
- Software and Platforms: Tableau, Power BI, AWS, Microsoft Azure, Google Cloud Platform
- Proficient in machine learning, NLP, data mining, Bayes analysis, time series analysis and other regressions

Project Experience

Jukebot - AI broadcasting chatbot Feb. - Oct. 2020

- Participate in the development of personalized music radio chat robot with Mindmeld Deep learning framework
- Build sentiment analysis model to automatically reply customers feedback given their different sentiment
- Debugged and improved the code to improve the chatbot's performance

Reading Comprehension Using Clinical Report (4 people group) Feb. - May. 2020

- Preprocessed clinical report metadata: parsed metadata, lowercasing, tokenization, removing noise characters etc.
- Embed report text using pretrained glove embeddings
- Built QANet model to solve reading comprehension task using clinical report

Clinical Abbreviations and Symbol Meanings Disambiguation Feb. - Mar. 2020

- Evaluated the Bag of words, BioBert Embedding, TF-IDF and POS Tagging in feature engineering
- Developed different text classification models to classify ambiguous abbreviations and symbols in clinical records
    - Decision trees, support vector machine, multi-layer perceptron and CNN

Travelers Insurance Fraud Detection Analysis Project (5 people group) Sep. - Dec. 2018

- Preprocessed the datasets with unbalanced classes and reduced dimensions to optimize fraud detection results
- Cleaned data and developed random forest and XGBoost in R to accurately detect insurance fraud
- Extracted business insights and presented to Travelers Company's data science team

Professional Experience

Data Science Intern Jun. - Aug. 2020

Ecolab Virtual

- Manipulated datasets using SQL and applied Microsoft Azure to build an end to end ML pipeline
- Developed Long Short Term Memory Model to forecast tank inventory usage and achieved 10% better prediction
- Developed a process for monitoring performance metrics of usage forecast combined with business value
- Cooperated with IT interns to complete a sales targeting project using AutoML model (1st Prize in Hackathon)

Data Science Volunteer Jun. - Dec. 2019

United Nations Development Programme Manhattan, NY & Virtual

- Analyze climate change and poverty with satellite image, using deep learning CNN models in TensorFlow
- Capture, disaggregate, and synthesize data to produce statistical analysis, outputs, and briefing notes
- Preprocessed large scale of survey and satellite image and managed the big data in Google Could Platform
- Utilized word embedding on Wikipedia articles as new features, achieving 5% more accurate prediction

Research Data Science Intern Jul. - Aug. 2019

The Michael J Fox Foundation for Parkinson Research Manhattan, NY

- Applied data analysis and modeling skills in R to analyze underlying patterns of 39,000s study participation
- Developed recommendations to increase study participation and communicate with team stakeholders
- Analyzed the retention rate and churn rate of research participants in R using survival analysis

Teaching Assistant in Computer Science Aug. 2018 - Present

College of Science & Engineering, University of Minnesota Minneapolis, MN

- Lectured 90 undergraduate students about discrete mathematics in discussion sections per semester
- Hosted 2 hours of office hours per week to answer students' questions
- Assisted in teaching graduated level machine learning course and answered students questions in office hours

Publication

- **R. Wan**, Z. Levonian, H. Ma, S. Yarosh, "How much is a "like" worth? Engagement and retention in an online health community", one of the two **outstanding posters** at ACM - Computer Supported Cooperative Work 2020

Education

Master of Science in Data Science	**University of Minnesota, Minneapolis, MN**	Anticipated - May 2021
Master of Art in Linguistics	**University of Minnesota, Minneapolis, MN**	Anticipated - May 2021
Bachelor of Arts-Statistics	**University of Minnesota, Minneapolis, MN**	Aug. 2018