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XUECHUN (LEONIE) LU

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my portfolio: https://xuechunlu7.github.io/

Technical Skills

- Python (TensorFlow, Keras, Pytorch, NumPy, Scikit Learn, Pandas, Pickles), R, PySpark (SQL), Java, C++.
- Feature Engineering, Supervised/Unsupervisied Machine Learning, Deep Learning, Experimental Design and Optimization.

EMPLOYMENRT

Research Assistant **MannuLife & Universtiy of Waterloo** **Jan 2021 - Current**

- Merged and cleaned datasets into a temporal format using PySpark.
- Explored K-NN and other drug natural grouping methods to reduce the dimensionality of drugs.
- Screened 4000 drugs that significantly affect a client's insurance duration using Sure Independence Screening.

Teaching Assistant **University of Waterloo** **Sep 2020 – Current**

- Courses TAed: Statistics for Software Engineering, Probability.

Teaching Assistant **University of British Columbia** **May 2017 – May 2020**

- Courses taught: Differential Calculus for Physics.
- Courses TAed: Computation and Programming, Differential Calculus for Physics and Engineering, Elementary Statistics.

PROJECT

Set Classification Based on A Histopathology Dataset (2021). Implemented a PointNet inspired deep network that can identify major lung tumors given a set of tissue images. Accuracy achieved: 90%. *TensorFlow, PyTorch Collab*

NLP - Sentence Ordering (2021). Given a set of unordered setences, used Google's Bert Model + Topological Sort to predict the correct order. Accuracy achieved: 76%. *PyTorch Collab*

Risk Prediction in Life Insurance Industry (2020). Used PCA and CFS to reduce data dimensions and classified risk levels of insurance buyers using regression, nerural network, random forrest and REP tree. *R*

Prediction of 2020 Mill Rates in Metro Vancouver (2020). Built predictive models (ordinary and advanced linear regression) to predict 2020 property mill rates for Residential, Light Industry and Business properties in Metro Vancouver. *R*

EDUCATION

Waterloo, ON **University of Waterloo** **Sep 2020 – Current**

- MMath in Statistics, expected: Aug 2021. GPA: 90/100
- Coursework: Deep Learning, Machine Learning; Experimental Design, Sampling Theory, Mathematical Statistics, Computational Inference, Statisical Consulting.

Vancouver, BC **University of British Columbia** **Sep 2016 – May 2020**

- BSc in Statistics, May 2020. GPA: 88/100
- Cousework: Statistical Learning, Experimental Design, Case Study in Statistics, Statistical Inferernce (Top 1), Finding Relationship in Data (Top 1); Ordinary Differential Equation, Partial Differential Equation, Real Analysis, Mathematical Proof (Top 1); Intro to Algorithm, Intro to Software Engineering.

AWARDS

- **Graduate Research Studenship (Jan 2021 – Current):** Research student under the supervision of Prof. Chengguo Weng, Prof. Liqun Diao and Prof. Yaoliang Yu.
- **Faculty of Science International Student Scholarship (2019 - 2020):** Awarded for demonstrating strong academic achievement, engagement in the Faculty, and the potential to make a scholarly contribution within their chosen field of study.