LI-YIN(LILY) YOUNG

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ENGINEERING SKILL

- **Languages:** Python, MySQL, C++/C
- **Deep Learning framework:** tensorflow, Keras, skit-learn, numpy, pandas
- **Other Skill:** Docker, Azure, Parallel Computing(multiprocess, MPI, OpenMP)

SELECTED PROJECTS

Using Deep Wassersein GAN to approximate stochastic process **Jan. 2020-Present**
Advisor: Professor Yu-Jui Huang
tools: python, tensorflow, scipy

- Encoded the stochastic process by using deep Wasserstein generative adversarial Networks(**WGANs**).
- Dropped down by RSME 30% compaired to current WGAN.
- By optimized two neural networks synchronically, I sped up the algorithm by 40%.

A deep learning approach for solving high-dimensional partial differential equation **July. 2018-Present**
Advisor: Professor. Xiaochuan Cai and Professor. Daniel Appelo
textbftools: python, tensorflow, scipy

- Construct data-efficient approach using machine learning algorithm for approximating the solutions of partial differential equation with up to 95%.
- By pretraining the network of 10% of training data, I sped up 20% of to reach a desired level of accuracy.

Analysis of Autoregressive hidden Markov model under asymmetric Laplace distribution **March. 2017- Nov. 2019**
Advisor: Professor Yu-Jui Huang
tools: python, matplotlib

- Formulated time series as Markov process under asymmetric Laplace distribution improve the accuracy of 30%.
- Reducing 50% time to process data by using Autoregressive hidden Markov model to estimate stock price.

WORK EXPERIENCE

Full Stack Developer
Main Street Exchange *Jun.2016-Aug.2018*
tools: MySQL, php, javascript

- Maintained 5 onsite databases and increased its admin effectiveness by 20%.
- Integrated database functionality into websites for automating document and capitalization table management.

Machine Learning Engineer
TopicTechnology *Jan. 2016-May. 2016*
tools: python, nltk

- Built topic model to identify the market and competitive landscape with up to 95% fidelity.
- Designed the algorithm to filter unstructured company and market information, improved the classification accuracy 30%.

Machine Learning Developer Summer Intern
Millennium Engineering & Integration *Summer 2014*
tools: c++

- Apply support vector machine(svm) on time series data to forecast customers' daily purchasing temptations.
- Optimized the code and reduce the data retrieval time by 40%.

PUBLICATION

Li-Yin Young, **The Effect of Moderator bots on Abusive Language Use** *Proceedings of the International Conference on Pattern Recognition and Artificial Intelligence. ACM, New York, NY, USA.* 2018 **tools:** python, nltk

EDUCATION

University of Colorado Boulder, Boulder, CO, U.S.A.
Master of Science, Applied Math, August 2018- May 2020
University of Colorado Boulder, Boulder, CO, U.S.A.
Master of Science, Computer Science, Augst 2013- June 2015