YINGZHE DONG

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EDUCATION

Northeastern University (NEU), Shenyang City, Liaoning, CHN   Sept. 2017- Jul. 2021
- Major: Finance and Banking (Fintech)   Minor: Software Engineering
- Expected Degree: Bachelor of Economics
- GPA: 3.87/5.00 (88.7/100)

McGill University, Canada   Aug. 2019- Sept. 2019
Business Data Analytics Training Program
- Courses taken: Data Analysis (A), Agile Project Management (B+)

PUBLICATION

Yingzhe Dong, Da Yan, Abdullateef Ibrahim Almudaifer, Sibo Yan, Zhe Jiang & Yang Zhou (2020), **BELT: A Pipeline for Stock Price Prediction Using News**, *IEEE Big Data 2020*

RESEARCH & COMPETITION EXPERIENCE

Stock price prediction based on Graph Convolutional Neural Network [CODE] Nov. 2020-Jun. 2021
Collaborator: Pengfei Xi, NEU
- Introduced external information to characterize the relationship between stocks, such as the relationship between common holdings, sectors, and form a variety of relationship diagram structures
- Input the relationship graph into the graph convolutional neural network, and use the network structure to extract the information brought by neighbor nodes to form the corresponding features
- Entered the features into GRU for the final stock price prediction
- Two of these innovations are currently being investigated: Turning relational graph inputs into dynamic ones to form dynamic networks; Introducing the attention mechanism into the graph fusion process for initial weight assignment

BELT: A Pipeline for Stock Price Prediction Using News [PDF][CODE]   Aug. 2019-Oct. 2020
Advisor: Professor Da Yan, University of Alabama – Birmingham, *the U.S.*
- Captured recent news reports from major media outlets and reputable investors
- Improved the Bert algorithm to enhance the accuracy of relevance analysis and sentiment analysis
- Connected affective attribute to the LSTM model and achieved the performance that exceeded the SOTA algorithm Stocknet
- Wrote the paper titled **BELT: A Pipeline for Stock Price Prediction Using News** as the first author, and the paper was included in ***IEEE Big Data 2020*** as the regular paper (the acceptance rate is about 15.5%, 83/535)

Music Arrangement Using NLP   May. 2019-Dec. 2019
Advisor: Professor Lixin Tang & Dr. Chege Legen, NEU
Key Laboratory of Data Analytics and Optimization for Smart Industry, Ministry of Education, China
- Conducted the music arrangement according to the actual conditions in the project
- Built a music database, read audio files using pygame in Python, decomposed them with wave, and employed librosa to extract beats, and visualized audios

An Empirical Study on Social Networks in the Sharing Economy (**National Project**)Feb. 2019-Dec. 2019
Advisor: Professor Yongli Li, NEU
- Studied on how the online social network impacts social recommendation based on the authentic data from Airbnb
- Took charge of data visualization, model building, and literature retrieval: crawled the data of 4300 Airbnb users, constructed the logistic model with proper variables (X & Y), introduced indegree to categorize users into three categories, and built regression model
- Awarded the outstanding national research project

'Historical Similarities' and Predictions of Stock Market Trends   Dec. 2018-Feb. 2019
Advisor: Professor Xu Tian, NEU
- Built models using the daily data of Shanghai Composite Index (SHCI) since Jan. 2005, verified the historical similarities between the current market and the 2009 market, and predicted the tendency of SHCI weekly and monthly

- Collected data, conducted the model testing and grey prediction, etc.
- <u>Won the First Prize (5%) in the Gauss Cup Mathematical Modeling Competition for National College Students</u>

INTERNSHIP

Tian Xue Wang Co. Beijing
NLP Algorithm Engineer, Department of Core Algorithm Mar. 2021-May. 2021
- Read articles about Semantic Textual Similarity, summarize the algorithms that are accurate and easy to engineer (e.g. <u>Sentence-BERT</u>), and implement them for oral scoring
- Analyzed some cases with large deviations in current speaking scores and conduct bad case analysis
- Implementation of some engineering processing, such as the production of net modules and pre-processing of language model

Kuaishou Beijing
Data Analyst, Department of Government Affairs Nov. 2020-Feb. 2021
- Set up the department data center from 0 to 1, undertook the initial work of data development, met the data requirements of the department: utilizing SQL to retrieve data from Hive and completing over 1,500 SQL queries, wrote the SQL template, and created the corresponding visual Kanban to support the unified and efficient data queries and statistics, and standardized data caliber
- Provided the strategies support for recommending high-quality works to the operation side, and developed appropriate public release strategy based on the characteristics of the published works of different secondary vertical classes
- Calculated resource allocation for different queues and periods around the internal resource pool of the department, optimized the code and configured a fitted engine
- Conducted the quantitative analysis (Gini-Simpson index and Shannon-Wiener index) for the ecological diversity of the primary vertical classes to prevent the recommendation system from being good at working out an optimal local solution that resulted in the 'Matthew effect' of distribution

China Securities Co., Ltd Beijing
Securities Sales Department Jul. 2019-Aug. 2019
- Analyzed fund indicators, conducted the fundamental and technical analysis of stocks
- Drew the pressure line and support line to analyze the shapes such as gold fork, dead fork, or island, and predicted the future trend of the stock
- Learned the distribution and type of fund composition by observing the fund manager's performances

LEADERSHIP

Training Camp for Overseas Economic Management Scholars, NEU Sept. 2017- Oct. 2018
- Discussed the hot economic issues with international scholars such as Kenneth Lloyd Schoolland
- <u>Awarded the excellent trainee</u>

Team Leader, Basketball Team, NEU Mar. 2018-Nov. 2020
- Led the team to participate in competitions
- Awarded the First Prize in the Basketball Competition hosted by the School of Business Administration, and the Second Prize in Jianlong Steel Basketball Match

Model United Nations Conference, Shenyang City, Liaoning Province, China Dec. 2017
- Discussed the issue of Brexit (leaving the European Union)

Model United Nations Conference- United Nations Environment Programme (UNEP), Jilin Huaqiao University of Foreign Languages Dec. 2017
- Discussed the detailed rules and regulations and development of UNEP

OTHER AWARDS

Second-class Scholarship, School of Business Administration, NEU	Mar.2021
First-class Scholarship, School of Business Administration, NEU	Dec.2020
Excellent Student Leader, School of Business Administration, NEU	Dec.2018
Third-class Scholarship, School of Business Administration, NEU	Sept. 2018

SKILLS

Technical: Proficient in Python and SQL; Basic command of Html, CSS, JS & C
Languages: Chinese (native), English (fluent)