Zijian ZHANG

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Education

City University of HongKong, Department of Information System HongKong,China

MSc in Business Data and Analytic 3.58/4.30 08/2022-present

Relevant Courses: Data Mining,Data Visualization, Database Management systems,Statistical Data Analysis,Analytical Programming with Python,(Human-ComputerInteraction),etc.

Nanjing Agriculture University, Department of Agricultural Economy Nanjing,China

Bachelor of Economy (Top2Nationwide) 3.57/4.50 09/2018-06/2022

Relevant Courses: Applied Statistics,Calculus,Linear Algebra,Econometrics(95+)
Discrete Mathematics,Multivariate Statistics,Mathematical Modeland Applications, Probability Theory and Mathematical Statistics,Information Technology,programming language(85+)

AcademicProjects

Individual Project: Multi-modal Prediction Analysis of Crowdfunding Platform HK,China

Instructor:Professor Raymond Y.K.Lau 09/2022-12/2022

- Independently collected an enhanced datasets covering two crowdfunding platforms, Kickstarter and Indiegogo (about42,000 videotextpairs).
- Extracted text sequence and video frame features based on pre-trained BERT and I3D networks and represented audio features by MFCC respectively.
- Independently designed the first multi-modal framework for text, audio, and video signals to learn complementarity among different modals. Unaligned text and video by cross-attention blocks.
- Through multi-card training,accuracy is improved4.3%,f1-score up 6.5%.The framework can also be applied in socialmedia, customer service and other scenarios where multi-modal signals exist.

Individual Project: Cryptocurrency Market Sentiment and Price Forecasts HK,China

Instructor:Professor Raymond Y.K.Lau 09/2022-12/2022

- Collected 190,000 tweet comments about cryptocurrency bycalling Twitter API.
- Extracted semantic features based on 100-dimensional Glove and BERT_base respectively, and classified sentiment based on three popular language models,TextCNN, BiRNN and fine-tuning BERT, to obtain high semantic sentiment information about tweets.
- Combined with historical price of Bitcoin, used Ridge regression to fit the closing price.
- Visualized regression results for the MSE minimum model, 76% (295 days) of the time series can be accurately fitted(prices fluctuate within 4%).

Group Project:Construction of Online Novel Reading Database HK,China

Instructor:Professor JianMA 09/2022-12/2022

- This project aims to develop an online novel reading platform, where users can browse,search and read various novel chapters in the form of account points redemption.
- Mainly responsible for the design of the database framework use SQL. Standardize the definition of data tables and used indexes to optimize the query performance of the database and establishrelated views.

Work Experience

Beijing Core biology science and technology co.,ltd Beijing, China

Product Research Assistant 07/2021-08/2021

- This work is about a disease detection kit development project.
- Mainly assisted the experimental team in characteristic engineering of clinical samples. Reduced the dimension and visualized the experimental results, and evaluated the sensitivity and specificity of the kit.

Honors & Awards:

The University-level Merit Student Scholarship (top 10%)	2018
The Scholarship of Jiangsu Province	2019
The Excellent Summer Exchange Student of Purdue University	2019
The Silver Award of CYC Mathematical Modelling Competition	2020
The Third prize of the 5th China Undergraduate Life Science Contest	2021
The Excellent Data Investigators of CFPS2020, CLES2021	2021
The Host of National College Students Innovation Training Project (Province Level),	2021
The Excellent Graduates of Nanjing Agricultural University	2022

Technical Skills:

Programming language:
Familiar with python, SQL, R, Tableau, PyTorch and TensorFlow

Machine Learning:
Skillfully reproduce a variety of classical NLP models (Word2vec, GRU, LSTM, Transformer, GPT, ELMO, BERT); video understanding and multi-modal models (ResNet, Two-Stream Network, I3D, CLIP, ViLT, etc.);
Familiar with basic machine learning algorithms (LR and related improvements, tree models and ensemble methods, SVM, Bayes and clustering algorithms, etc.)

Data structure:
Master the basic data structure (array, linked list, stack, queue, binary tree, graph, etc.) and sort search, dynamic programming, etc.