Name: Wang Wenbin

Age: 22 **Gender:** Male
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Education Background:

Economic Statistics，Huazhong Agricultural University(Project 211/ " Double First-Class" university project) 2018-2022

Computer Science and Technology, ShanghaiTech University("DoubleFirst-Class" university project) 2023-

Main Course： Database Technology and Application, Statistical Principle, Data Analysis Method and Application, Mathematical Modeling, Time Series Analysis, Optimization Theory and Method, Operations Research

Working Experience

- 2022/04--2022/05, I interned as python data analyst at CSC Financial Co., Ltd, Wuhan
- 2021/07--2021/08 & 2022/04-2022/06, I am an intern at the data analysis position of the Finance Office of Baisha Town, Xiaochang County, Hubei Province
- 2020/09--2022/05 , I participated in the national college student innovation and entrepreneurship training program "Legal Protection of Geographical Indications under the Background of Rural Revitalization—Taking Honghu Lotus Root Industry as an Example", and passed the evaluation and acceptance of the school's expert steering committee, and was evaluated as qualified
- In 2020, I participated in the Internet + competition "Heart Light Youth Tour - Kaleidoscope of Rural Students" and won the bronze prize at the school level

Research Experience & Academic Achievements

High-precision basic facial expression recognition

- The content is to select the expression state from static pictures or video sequences, I define six basic expressions plus neutral expressions, and use deep convolutional neural network (VGG19 and Resnet18) to integrate feature extraction and expression classification
- I use the dropout strategy before the fully connected layer to enhance the robustness of the model
- Two loss functions are used: cross entropy loss function and Hinge loss function
- Dataset: FER2013, CK+, and data enhancement by flipping, rotating, etc.

Gradient Descent Based Decision Tree Algorithm and Nonlinear Programming Credit Risk Assessment Model

- I add a regularization function to enhance the generalization performance, use the idea of integrated learning to superimpose multiple decision tree models, and perform iterative optimization based on the gradient descent algorithm to obtain the integrated model
- Based on the obtained integrated model, establish the objective function with the minimum probability of default, and establish a credit risk assessment model
- I use Python to crawl stock price information since the COVID-19 epidemic in various industries, with the goal of maximizing loan income and minimizing customer churn rate, and considering constraints such as loan amount and customer churn rate, to establish a non-linear multi-objective programming model for bank credit strategies

Text classification task based on RCNN network

- I use a bidirectional LSTM network structure, using the word itself and its context to represent the word, which can introduce relatively little noise so that contextual information can be captured as much as possible when learning word representation
- I use the CNN network to extract the feature representation of the text, followed by a max-pooling layer, which can automatically determine which features play a key role in text classification to capture the key components in the text
- I use the softmax function to convert the output numbers to probabilities and get the classification results
- Dataset: 2018 "Daguan Cup" Text Intelligent Processing Challenge Dataset, Toutiao Chinese News (Text) Classification

Awards

- 2022--06, I was named an outstanding graduate of the School of Economics and Management
- 2020--12, I won the first prize in the Hubei Provincial Division of the China Undergraduate Mathematical Contest in Modeling
- 2019--11, I was awarded the "Merit Students" for the 2018-2019 school year
- 2020--07, I was awarded the "Study Achievement Progress Award" from the 2019 school year to the first semester of the 2020 school year
- 2020--06, I was awarded the second prize of the undergraduate group of the 10th MathorCup University Mathematical Modeling Challenge in 2020
- 2020--06 , I was awarded the first prize of the 17th May 1st Mathematical Contest in Modeling in 2020
- 2020--12, I was awarded the "Practical Innovation Award" for the 2019--2020 academic year
- 2020--06, I was awarded the second prize in the first stage and the third prize in the second stage of the 13th "Certification Cup" Mathematics China Mathematical Modeling Network Challenge

Qualifications

- Language Skills: CET Band 6, Mandarin Proficiency Testing Level Certificate
- Professional Skills: C/C++, Python, MATLAB