Hao LIN

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EDUCATION

Nanjing University of Information Science and Technology Nanjing, China
Bachelor of Data Science and Big Data Sep. 2018 - present
• **GPA**: 90.7/100
• **Ranking**: 2/73
• **Relevant courses**: Object-Oriented Design (96/100), Signals&Systems (96/100), Basis of electronic technology (98/100), Pattern Recognition and Machine Learning (91/100), Optimization Theory and Algorithms (94/100)

Duke Kunshan University Suzhou, China
Machine Learning Summer Program Aug. 2020
• Lectures on Machine Learning theories

RESEARCH EXPERIENCE

Object segmentation with ViBE (Individual Project for Class) Jan.2021
• With Matlab, reimplementing the fundamental ViBE algorithm by working on surveillance videos with static backgrounds

Target tracking in complex video scenarios (Individual Project for Class) Dec.2020
• With OpenCV, Pyqt5, and template matching algorithm, objects were accurately tracked when the template is perfectly built
• A user interface was produced to enhance user-friendliness
• Strengthening robustness by tailoring the image close to the template and referring to the previous predicted one

Rapid Recognition of COVID-19 Based on Machine Learning (Datacastle Invitation Contest) Aug.2020
• Manually cleaning data by counting missing, repetitive data and setting boundaries for features
• Boxing data with decision trees and filtering data with PCA algorithm
• Using grid search to determine hyperparameters, mixing logistic regression and SVM for cross-validation

Database Design of Online Ordering System (Individual Project on Database Course Design) Jun. 2020
• Building a database with SQL Server focusing on the management of customer's information and food orderings

• Designing three kinds of users: normal user, normal administrator and system administrator to distribute proper limits of authority
• Creating vision as well as index of the database to accelerate the read action, adding constraints to optimize the structure of the database

Study on Coal Price in a typical place (Mathematical Contest in Modeling)
May 2020

• Data collection and processing: working on enumerated data with SPSS, visualizing data via matplotlib in Python, calculating impacts on coal price by leveraging Pearson coherence matrix and ultimately reaching a conclusion by determining six major factors
• Model establishing and training: designing an ARIMA model to fit in a long-term data prediction, importing the selected six factors to a linear reaction to appropriately set the hyperparameters, differentiating the model to adjust to a shorter-term prediction, and validating the model with the real data using SPSS

HONORS & AWARDS

National Scholarship (Top 0.3%)	12.2020
Merit Student of the school (Top 25%)	11.2019 & 11.2020
Principal Scholarship (Top 0.25%)	11.2020
Second Prize in DataCastle Invitation Contest	08.2020
First Prize in University's Patent Competition (With one patent accepted)	05.2020
Second Prize in May Day Mathematical Modelling Contest	05.2020
Certificate of School's Qualified Volunteer	04.2020
First Class Award (Top 15%)	11.2019
First Prize in the China Mobile Internet Innovation Contest	11.2019

SKILLS

Programming Languages & Tools: Python (Jupyter Notebook, Pycharm), C++ (VS), SQL (SQL server), Matlab
Hobbies: Violin, Jogging, Traveling