Xiao Chen

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EDUCATION

Fudan University (FDU)   Shanghai, China
Bachelor of Science, Mathematics and Applied Mathematics   Sep. 2020 – May 2024 (Expected)
GPA: 3.79/4.0 (Ranking 6/189)
Selected Honors: 2nd Prize, Outstanding Student Scholarship of Fudan University (2022); Top 100 for the PDE Section, S.T. Yau Undergraduate Mathematics Competition (2022); Undergraduate Professional Scholarship (2022); Junyuan Scholarship (2 per department at FDU, 2022); National Scholarship (Top 2%, 2021)
Selected Courses: Advanced Mathematics, Ordinary Differential Equations, Abstract Algebra, Principles of Mathematical Analysis, Functions of Complex Variables, Real Analysis, Mathematical Models, Probability Theory

RESEARCH EXPERIENCE

Algorithmic Fairness in Artificial Intelligence Medical Image Analysis   Feb. 2023 – Present
FDU Internship and Training Program for College Students, Supervised by Professor Xingjun Ma
- Investigate the fair decision-making problem of different AI models in medical diagnosis scenarios
- Design simple and efficient fairness learning methods to correct the decision bias of models, such as in the face of different races and ethnicities
- Look into small biased models as a counterfactual to guide fair learning of large models based on knowledge distillation and self-supervision
- Plan to apply the abovementioned models to collected bias samples for explicit and implicit bias problems

"Detection Expectation-SIJ" Cycle Model for COVID Testing Based on Time-lag Dynamical System
24th "East China Cup" Mathematical Modeling Competition, 3rd Prize Winner (**Top 3%**)   May 2022
- Explored the optimal mixed detection rates for multiple rounds of nucleic acid testing using a time lag model, mixed detection expectation model, and SIJ infectious disease model
- Collected and pre-processed COVID Infection data from Shanghai and Guangzhou in April 2022
- Proposed different nucleic acid testing plans with established models for different regions

SELECTED PROJECTS

Malaria Cell Images Classifier(Course Project for Deep Learning)   Apr. 2023
- Adapted data augmentation tools from Github to this project, enlarging the original dataset by over 5 times
- Implemented a CNN in Python, achieving over 95% accuracy on test dataset

Prediction of House Prices (Kaggle Competition)   Mar. 2023
- Completed raw data analysis and processed it with data-washing techniques
- Used Ridge&Lasso Regression to increase robustness
- Performed K-Fold Cross Validation to the limited training dataset

WORK EXPERIENCE

Taikang Pension & Insurance Co. Ltd.   Shanghai, China
Data Analyst Intern, Career & Business Operations Department   Jan. 2022 – Feb. 2022
- Used Excel to analyze earnings data related to pension products and created a new automated data analysis process using Visual Basic
- Created posters and used automated scripts to speed up the poster production process
- Collaborated with colleagues to create reports with visualized data based on B2B data
- Assisted in the completion of market expansion studies for a B2B project

EXTRACURRICULAR ACTIVITIES

Officer, FDU Life Care Association and Innovation Center   Nov. 2021 – Present
Academic Communication Officer, Self-Management Committee of Tengfei College   Sep. 2020 - Jul. 2021

PROFESSIONAL SKILLS

Languages: English (Proficient), Chinese (Native)
Computation: Python, C, C++, LaTex