BO XIA (XAVIER)

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EDUCATION

Junior, Carnegie Mellon University   Expected Graduation: Dec 2023
- Bachelor of Science in Information Systems and Double Major in Statistics and Machine Learning
- GPA: 3.82/4.0 (Fall 2020, Spring 2021 - Dean's List with High Honors, Dietrich College)
- Quantitative Social Science Scholars (QSSS) for Carnegie Mellon University

Relevant Coursework
- Fundamentals of Programming and Computer Science | Principles of Imperative Computation | Statistical Methods | Introduction to Probability Theory | Enterprise Web Development | Database Design and Management | Introduction to Statistical Research Methodology

RELEVANT SKILLS

- Programming Language: Python, R, C, SQL/NoSQL, MongoDB, HTML/CSS, PHP
- Modules / Packages: Tensorflow, PyTorch, Numpy, Pandas, Matplotlib, Git, Tmux/Unix
- Others: English (Fluent), Chinese (Fluent), Negotiation, Leadership, Communication, Database Design

RESEARCH EXPERIENCE

Classification of White Drafts of Spectral Type A, *Team Member*, Carnegie Mellon University   Aug 2021 – Dec 2021
- Produced intermediate statistical project for USCLAP Competition by training a classification model
- Performed EDA and Variable Selection on dataset with more than 9000 rows on White dwarfs dataset
- Applied statistical learning and ML models like Random Forest and XGBoost, ranked with AUC values before maximizing Youden's J statistic for accuracy of classification model

CMU Argo AI Lab, *Research Intern*, Carnegie Mellon University   June 2021 – Present
- Utilized PyTorch along with vision-language curation to curate vision benchmark dataset for CVPR 2022
- Worked with various PhD and MS students and updated design documents and research methodology

CMU Libraries, *Summer Undergraduate Research Apprentice* (SURA), Carnegie Mellon University
- Analyzed dataset of 9000 rows using EDA, co-variate analysis and different machine learning models   May 2021 – Aug 2021
- Produced and presented a comprehensive research thesis to clients, including non-technical audience
- Developed an adaptable and replicable code sample in R for client to further our research

PROJECTS

Instagram Database Design, *Team Member*, Carnegie Mellon University   Aug 2021 – Dec 2021
- Studied Instagram's business model with 10 user stories and developed relational and physical models
- Transformed user stories into SQL queries and normalized the physical models for database creation

Personalized Telegram Bot, *Creator*   June 2021 – Present
- Created a Bot on Telegram, a messaging application, using Python and Telegram API
- Integrated Google Sheets with the bot using Webhook and Google Scripts for personal expenses tracking

Fundamentals of Programming and Computer Science, *Creator,* Carnegie Mellon University   Aug 2020 – Nov 2020
- Created a Soccer Game using Python and Object-Orientated Programming incorpated with tkinter GUI
- Imported dataset of real players and conducted basic data wrangling using Numpy and Pandas
- Implemented increasing difficulty of AI for progressive gameplay

Project Willpower, *Hackathon Participant*, SCDF x IBM Hackathon   Apr 2020 – July 2020
- Won 5th Place in SCDF x IBM Hackathon with idea of portable household hazard detection
- Deployed web scrapper to scrape images to create dataset of 2000 household objects for training/test split
- Developed a Webapp using TensorFlow Object Detection API for household hazard prevention

LEADERSHIP EXPERIENCE

Blockchain Club, *External Activities Chair*, Carnegie Mellon University   Aug 2021 – Present
- Secured funding from CMU Alumni to bring 15 Club Members to ETHDenver 2022
- Planned and executed recruitment talks with external speakers from firms like Paradigm and Celo

Quick Response Task Force, *Leader,* Singapore Armed Forces   June 2019 – Aug 2019
- Spearheaded a task force of 10 individuals for Annual National Day Parade of Singapore
- Tackled logistical, safety and spectator-specific problems over 8 weeks of rehearsal