Yi Li

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EDUCATION

Boston College **Chestnut Hill, MA**
B.A. in Computer Science, Minor in Philosophy Expected May 2024
B.S. in Management, Double concentrations in Finance, Accounting for finance and consulting

- **Cumulative GPA:** 3.90 / 4.00 (Dean's List First Honors)
- **Relevant Courses:** Algorithms, Computer Systems, Computer Vision, Natural Language Processing, Probability

RESEARCH EXPERIENCE

Ranger Lab: Muscle Segmentation from Ultrasound Images **Chestnut Hill, MA**
Research Assistant (Advisor: Prof. Bryan Ranger) Oct 2022 – Present

- Developed an algorithm for automatic muscle segmentation from ultrasound images to measure muscle thickness
- Create masks and labels for 1,000 ultrasound images to train traditional and deep learning algorithms
- Optimize and fine-tune Attention U-Net models to accurately segment muscles from different body parts, achieving an average accuracy of over 96%

Incremental Topological Sort **Chestnut Hill, MA**
Research Assistant (Advisor: Prof. Hsin-Hao Su) Sep 2022 – Jan 2023

- Performed a comprehensive analysis of an innovative incremental topological sort algorithm that surpasses the state-of-the-art algorithm in terms of runtime efficiency
- Developed and executed a rigorous testing program to examine the correctness and speed of the algorithm, providing valuable insights into the algorithm's performance and capabilities

PROJECTS

HC18: Fetal Head Circumference Competition **Chestnut Hill, MA**
Project Lead Sep 2022 – Dec 2022

- Implemented U-Net and its variants to estimate fetal head circumference from ultrasound images, and optimized model performance through investigating top approaches in the leaderboard
- Conducted a detailed analysis of the fine-tuned models and authored a research paper on their performance

MBTI Personality Classification with Performance Assessment **Chestnut Hill, MA**
Project Member Sep 2022 – Dec 2022

- Collaborated with a team of four to investigate state-of-the-art deep learning techniques for detecting the MBTI personality type of a given text author
- Presented poster on our study's limitations and results: logistic regression was most accurate in E/I and F/T personality pairs (58.4% and 62.1%), while DistilBERT performed best in N/S and J/P personality pairs (73.8% and 71.6%)

Emotional Sentiment Detection **Chestnut Hill, MA**
Project Member Feb 2022 – Aug 2022

- Developed an interactive webpage to detect emotions (sadness, joy, love, anger, fear, surprise) from user input text, utilizing a dataset of 14,000 sentences for model training
- Explored various techniques and achieved an accuracy of 84.5% through the use of Bayes model

Eventsletter **Chestnut Hill, MA**
Project Lead Sep 2019 - May 2020

- Conceptualized and developed an iOS app and collected feedback from 50 students during the testing phase
- Conducted comprehensive market research to formulate a robust business plan, securing admission into BC's accelerator program and receiving $1,500 in funding
- Developed an MVP of the web application's back-end utilizing Ruby on Rails and the Aurelia framework

SKILLS & INTERESTS

Languages: Native in Mandarin, fluent in English, conversational proficiency in Cantonese
Programming Skills: Python, C, Java, Html, CSS, R, Swift, Ruby
Interests: AI applications on art, contemporary art, playing piano, singing, cooking