Haoyu Wang

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https://whybfu.github.io

Education

University of Pittsburgh (Master's Degree) Pittsburgh, US 2024 - 2026(expected)

- Major: Information Science

Beijing Forestry University (Bachelor's Degree) Beijing, CN 2020 - 2024

- Major: Computer Science and Technology

Internship Experience

UPMC Hillman Cancer Center (Position: Computational Biology Bntern) Pittsburgh, US August 2024 – current

- Utilized Python for developing integrative machine learning approaches and Omics data analysis at Osmanbeyoglu Lab
- Optimized and applied STAN, a machine learning method, to pancreatic cancer data. Used statistical methods to find consistency in Transcription Factor (TF) and Pathway activity between different patients

Beijing Huashu Yihui Technology Co., Ltd (Position: Data Analyst) Beijing, CN March 2024 – JUN 2024

- Utilized Python and SQL for the analysis and verification of medical data
- Participated in the development of the medical retrieval system, and developed various methods to query the database

Shenzhen Zmotion Technology Co., Ltd (Position: Vision Engineer) Shenzhen, CN July 2023 – March 2024

- Utilized Python for visual positioning, matching, and detection algorithm encapsulation in the company's IDE
- Assisted in function packaging for visual features and created document for developer

Research Experience

Pancreatic Data Analysis August 2024 – current

- Utilized LMM to model the relationship between gene expression and pathway/TF activity to infer the activity of the pathway/TF
- Analyzed the activity difference between clusters, such as Cancer, Stromal, using p value to determine which pathways/TFs have significant influence on each cluster

Driver Fatigue Detection Algorithm Based on Deep Learning (Graduation project) March 2024 – Jun 2024

- Realized the analysis of human fatigue states based on YOLOv8-pose and devised a multi-modal evaluation algorithm
- Realized the analysis algorithm of yawning and squinting based on facial key points detection

Office OA System Based on Mybatis February 2023 – May 2023

- Developed an integrated database system supporting different SQL languages for mainstream database maintenance
- Involved in template writing and module testing for two SQL dialects and participated in overall system integration

Detection and Removal Operation Robot June 2022 - August 2022

- Developed a perceptron component, including the deep learning-based object detection and the ranging function
- Utilized YOLOv5 for detection, used the coordinate difference between the boxes of the objects to calculate the distance

Certifications

Machine Learning, Modeling, and Simulation Principles - Massachusetts Institute of Technology 2021

Skills

- Programming skills: Java, C++, C, Python, Pytorch, Git, Linux, Matlab, Labview, MySQL, SQL Server
- Web Dev: Html, Css, JavaScript, Vue, Apache Web Server, Tomcat Web Server