Zhuo Wang

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EDUCATION

Northeastern University (China), College of Medicine and Biological Information Engineering — Shenyang, China
Bachelor, *Biomedical Engineering, GPA: 3.35/5 (84/100)* — 09/2019-06/2023

- Core Courses: Data Science Foundations (Python), C&C++ Advanced Programming, MATLAB, Data Analysis and Visualization, Data Structure, Healthcare Data Analysis, Medical Informatics, Signal and Linear System, Introduction to Intelligent Radiomics, Digital Image Processing, Medical Imaging Technology and System, Molecular Biology

University of Dundee, School of Science and Engineering — Dundee, UK
Bachelor (Honours), *Biomedical Engineering, GPA: 2:1 Honours, B1 (68/100)* — 09/2022-06/2023

- Core Courses: Image Diagnostics, Biomedical Photonics, Deep Learning for Medical Imaging, Biomedical Research Frontiers, Biomedical Engineering Project

ITMO University, Summer School — St. Petersburg, Russia
Extension, *3 European Credit Transfer and Accumulation System (ECTS) credits, Grade: A* — 07/2022

- Core Course: Machine Learning

RESEARCH EXPERIENCE

Enhanced External Counterpulsation (EECP) Hemodynamic Effect Based on 0D-1D Model — Shenzhen, China
National Key R&D Program of China Fund Project — 07/2021-08/2022

- Developed a model of hemodynamic simulations to predict EECP effects (EECP is performed as a non-invasive treatment to lower the number and intensity of angina episodes.) on patient-specific hemodynamics, applied the 0D-1D model to simulate the hemorheology of patients under EECP state to make the best treatment plan.
- Collected hemodynamic data for model simulations, measured and cleaned data at the Eighth Affiliated Hospital, Sun Yat-sen University, recorded the blood velocity data graph using Doppler ultrasound, and achieved 80% prediction accuracy rate of blood velocity under EECP state.
- Simplified the steps for measuring blood flow velocity by reducing unnecessary three experimental phases.
- Collaborated with other researchers to publish our research results as a paper on *"Computer Methods and Programs in Biomedicine"* as one of the authors.

Unsupervised Learning for Quantitative Poly-energetic Computed Tomography (CT) Reconstruction — Dundee, UK
Final Project — 09/2022-Present

- Implemented a segmentation-free unsupervised deep learning reconstruction algorithm to directly estimate the CT electron density.
- Applied advanced denoising methods for image reconstruction problems using unbiased CNN (Convolutional neural networks) based on PyTorch.
- Validated higher accuracy in attenuation modelling compared with other models, reached the lowest root-mean-squared-error 0.0298, and demonstrated superior quantitative imaging with Polyquant data.

WORKING EXPERIENCE

Hazel Investment Co., LTD — Shenzhen, China
Data Analyst Intern — 01/2022-02/2022

- Participated in data extraction and cleaning of a report on investor interaction with listed companies of Hazel Investment through SQL syntax.
- Employed SQL to query and extract the data from the public opinion database of listed companies and summarized ten types of data on investor questions and company secretary responses.
- Visualized the top 10 listed companies with the most questions asked by investors and investors' active time using Tableau and matplotlib package.

EXTRACURRICULAR ACTIVITY

LinkedIn China*, Campus Ambassador* — 12/2021-07/2022
Liaoning Science and Technology Museum*, Volunteer* — 10/2021
Shenyang Hunnan District No. 3 Primary School*, Volunteer* — 12/2019

SKILLS & INTERESTS

- Language Skills: Chinese (native), English (fluent)
- Computer Skills: Python, MATLAB, C&C++, Microsoft Office
- Interests: Reading, Singing, Traveling, Hiking, Soccer