

Zhuo Wang

Tel: (401) 868-8567 | Email: zhuo_wang1@brown.edu | linkedin.com/in/zhuo-wang-474109227/
Brown University, Providence RI, USA · 02912

EDUCATION

Brown University, School of Engineering Providence, USA
Master, Biomedical Engineering, GPA: 4.0/4 09/2023-06/2025

- Core Courses: Image Understanding, Computational Cognitive Neuroscience, Pattern Recognition and Machine Learning, Computer Vision

Northeastern University (China), College of Medicine and Biological Information Engineering Shenyang, China
Bachelor, Biomedical Engineering, GPA: 3.4/5 (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, Signal and Linear System, Digital Image Processing, Operating Systems

University of Dundee, School of Science and Engineering Dundee, UK
Bachelor (Honours), Biomedical Engineering, GPA: First Class Honours (73/100) 09/2022-06/2023

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

PROJECT EXPERIENCE

Deep Learning Based Edge Detection Providence, USA
Image Understanding Fall 2023

- Rebuilt the experimental setup for multiple state-of-the-art detection algorithms using Python and conducted thorough experiment replications.
- Analyzed and compared the performance of various algorithms under different datasets and visual transformation conditions, offering unique insights and proposing improvement suggestions.

RESEARCH EXPERIENCE

Camera Pose Estimation in Endoscopic Video Providence, USA
Independent Studies Project of the Laboratory for Engineering Man-Machine Systems (LEMS) 10/2023-Present

- Investigated cutting-edge techniques and approaches in computer vision and machine learning to identify potential avenues for enhancing camera pose estimation in endoscopic video.
- Evaluated various state-of-the-art camera pose estimation algorithms in endoscopic video to understand their strengths and weaknesses.

Unsupervised Learning for Quantitative Poly-energetic Computed Tomography (CT) Reconstruction Dundee, UK
Final Project 09/2022-05/2023

- 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

SKILLS & INTERESTS

- Computer Skills: Python, MATLAB, C&C++, SQL, Linux, Microsoft Office
- Computer Vision Skills: Visual Odometry, SLAM, Camera Pose Estimation, 3D Reconstruction
- Interests: Reading, Singing, Traveling, Hiking, Soccer