Jingyu Huang

(+45) 50374873 | Copenhagen 2400, Denmark
Email: huangjy5517@gmail.com | Personal website: https://yyberry.github.io/

PERSONAL STATEMENT

Recent graduate with a Master's degree in Computer Science from the University of Copenhagen and a Bachelor's degree in Software Engineering from Jilin University. Proficient in multiple programming languages, including **C, C++, Python, Erlang, and R**. Experienced in implementing and evaluating **advanced algorithms, machine learning models, and recommender systems** through various academic projects. Equipped with an **extra two-year work visa**, I am **ready to start full-time employment immediately**, offering a strong foundation in both theoretical and practical aspects of computer science, as well as a keen interest in continuous learning and innovation.

EDUCATION

Jilin University, China 09/2017 – 06/2021
Bachelor of Engineering in Software Engineering *GPA: 87.3%*

- Main Courses: Object-oriented Programming, Linear Algebra, Database Principles, Probability and Statistics, Advanced Mathematics, Operating System Principles, Compiler Principles and Implementation

University of Copenhagen, Denmark 09/2021 – 06/2023
Master of Science in Computer Science *GPA: 7/12*

- Main Courses: Advanced Algorithms and Data Structures, Machine Learning, Signal and Image Processing, Web Science, Neural Information Retrieval, Advanced Programming

PROJECT EXPERIENCE

Anatomical Prior-based Segmentation of Deep Brain Nuclei using Adversarial Training 02/2023 – 06/2023

- Investigated different approaches for introducing anatomical priors through adversarial training to U-Net
- The U-Net with adversarial training exhibited an average improvement of 0.04 in Dice coefficient compared to the single U-Net on the test set, while also achieving an average reduction of 1.8 mm in Hausdorff distance
- Investigated the challenges specific to adversarial training and identify the key factors that impact the success of adversarial training
- Summarized guidelines for adversarial training according to experiments

Implementation of Recommender Systems 02/2022 – 03/2022

- Implemented and evaluated Collaborative Filtering, Content Based and Hybrid Recommender Systems
- Cleaned and preprocessed 5-core subset in the Software category of the Amazon Review Data
- Used Rank-based Utility Measures to evaluate the recommendations of each recommender system, the hybrid recommender system based on weighted strategy and TF-IDF model have bestperformance

Research on Medical Sample Amplification Algorithm Based on Generative Network 02/2021 – 06/2021

- Compared the effects of three GAN models (WGAN-GP, SAGAN and ConSinGAN on medical image samples.
- Used these three GAN models to double the train set and keep the test set unchanged. The original dataset is composed of randomly captured images in the public El Salvador Atlas of Gastrointestinal Video Endoscopy
- Combined LBPH and SVM to classify the original data set and the amplified data set
- Compared the classification results, the data set amplified by ConSinGAN is improved by 5% than original data set

Vehicle detection under foggy conditions based on Convolutional Neural Network 06/2019 – 06/2020

- Proposed a two-step recognition algorithm, AlTwo, to realize vehicle recognition under foggy conditions
- Used atmospheric scattering model to fog the public GTI vehicle data set to get low, medium and high-density foggy images and used the training set of foggy and original images to train the CNN based on AlexNet. The average of foggy image recognition rates is 61.51%, well below the original image recognition rate of 99.27%
- Defogged the foggy images with the dark channel prior method, to get the test set of defogging images
- Tested CNN with defogging test set, the accuracy of the foggy image recognition has been improved to 97%
- Pubilication: Fengxin Li, Ziye Luo, Jingyu Huang et al. AlTwo: Vehicle recognition in foggy weather based on two-step recognition algorithm[C]. ISNN 2020 (17th International Symposium on Neural Networks)

SKILLS & INTERESTS

Programming languages: C, C++, Python, Erlang, R
Interests: Oil painting, piano