Rui SHENG

Email: rshengac@connect.ust.hk Tel: (00852) 9330-8459

Address: The Hong Kong University of Science and Technology, HONG KONG, China

Education

Wuhan University (WHU), Wuhan, China   Sep 2017- Jul 2021
Bachelor of Science in Computer Science and Technology
GPA(overall):**3.92/4.0**
Rank:**2/334**
Core courses: Advanced Mathematics(100/100), Linear Algebra(96/100), Probability Theory(98/100), Discrete Mathematics(97/100)

Award:
Hong Kong Ph.D. Fellowship Scheme(HKPFS)2021
National Scholarship in Wuhan University(6/342) (Highest Scholarship in WHU)2019
National Scholarship in Wuhan University(6/334) (Highest Scholarship in WHU)2020
National College Mathematics Modeling Competition Competition Award M 2019
The First Prize of the 10th National College Mathematics Competition(Non-math Major) 2018
The Second Prize of the National College Internet of Things Competition 2019

Research Experiences

Research Assistant, Multimedia Engineering Center, Wuhan University   Apr 2019-May 2020
Micro-expression Recognition System
Advisor:Professor **Ruimin HU** (Professor of Computer Science Department, Wuhan University)
- Aimed at exploiting a system which could assist users to know the real emotion of the subjects better.
- Developed the algorithm of the micro-expression recognition system. Used GAN network to reduce the difference of the non-expression parts of the face, and provided a new method to improve the accuracy of micro expression recognition.
- Extensively explored the expression forms of facial features and found a more reliable micro-expression coding method.

Research Assistant Online, Learning and Vision Lab, National University of Singapore   June 2020-August 2020
Research on Image Denoising
Advisor:Professor **Jiashi FENG** (Professor of Computer Science Department, National University of Singapore)
- Aimed at designing a network which could remove the Gaussian noise of any parameter value.
- Removed noise dynamically by ODE(ordinary differential equation) method to achieve the effect of slowly reducing noise until get the clear image.
- Tested many methods such as DnCNN(Residual Learning of Deep CNN for Image Denoising) , and confirmed that ODE method will be used to learn the continuous process of denoising.

Team Leader, National Entrepreneurship Competition for College Students, China   Jan 2020-June 2020
Children's Educational Application Based On Natural Language To Image Technology
Advisor: Professor **Shubo LIU**(Professor of Computer Science Department, Wuhan University)
- Based on speech recognition and natural language to image technology to design an application which can transform the story of children into a semantic animation.

- Put forward the idea and main function target of application, studied the technology which could generate compositional scenes from textual descriptions, encapsulated the interface of text2scene and improved it.
- Completed the second generation of products and became one of the 12 teams of Wuhan University to reach the final, we are preparing the final defense at the present.

Research Assistant, China Software Cup, China Feb 2020-June 2020

Fault Root Cause Location System

Advisor: Professor **Yanjiao CEHN**(Professor of Computer Science Department, Wuhan University)

- Analyzed the actual production of network topology and alarm data, designed and implemented a fault root cause location algorithm, which could accurately locate the fault root cause node.
- Extracted three features of the dataset, and determined the fault root cause node by a three-step localization algorithm.
- The accuracy of the system could reach 96% to locate the fault root cause node.

Team Leader, National College Innovation Project, Wuhan University Feb 2019 - Feb 2020

Head-electricity Individuation Sleeping Instrument

Advisor: Professor **Dan CHEN**(Professor of Computer Science Department, Wuhan University)

- Exploited a machine which could improve the sleeping quality with the EEG Feedback System and the Music Recommendation System.
- Built the front-end web pages, used the collaborative filtering method based on songs to classify and recommend songs.
- Completed the combination of brain wave feedback system and music recommendation system, which helped specific users find the music most suitable for their sleep and rest, and achieved personalized customization.

Leadership & Activities

Vice Captain, Summer Practice Aug 2019

- Responsible for contacting the companies, obtaining the visit permission of the companies, and discussing the specific investigation time.
- Led the team to acknowledge the new high-tech industry according to the technology enterprises and newly established firm especially internet enterprises,and know better about the environment of the new high- tech technology and managing and marketing strategies of the enterprises and the tendency of the technology.

Chief, Luojia Technology Club, Foreign Affairs Development , Wuhan University Sep 2019- Sep 2020

- Arranged the activities and set the development direction of the club; supplied the technology guide to the associations.
- The following activities were organized: the library night in 2019; zero cup web design competition in 2019.

Skills

Adept in C, C++, java, python, Matlab; Experienced in SAS, latex.

Have been involved in neural networks and a simple Linux operating system.