

# WANG ZHUORAN

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## EDUCATION BACKGROUND

### Fuzhou University & National University of Ireland, Maynooth

09/2019-06/2023

- Major: Automation (Named Robotics & Intelligent Devices at MU) | GPA: 3.79/4
- Diploma: Bachelor of Engineering & Bachelor of Science | Maynooth International Engineering College

## SCIENTIFIC RESEARCH

### Research on the Image Completion of Ink Paintings Based on Deep-learning

05/2022-05/2023

- Conducted literature review of image completion/inpainting;
- Deepened my understanding of classical models including Transformer, GAN, RNN, and AutoEncoder, and their applications in the field of image completion;
- Planned to do ink painting image completion with the application of Transformer and GAN

### Algorithms for Big Data, Carnegie Mellon University (GIS)

05/2022-07/2022

Mentor: Prof. David Woodruff, Carnegie Mellon University

- Did in-depth study of Amorboaint Analysis, Online algorithms, and Approximation algorithms;
- For the detection of plant lesions, practiced multiple neural network models (AlexNet, VGG, ResNet; AlexNet+Transfer Learning, VGG+Transfer Learning, ResNet+Transfer Learning) based on PlantVillage and completed the writing of relevant reports

### Summer Scientific Research, Joint Laboratory for Cognitive Systems and Information Processing

07/2021-08/2021

- Studied CS231n, Stanford University under the supervision of Associate Professor Wenxi Liu;
- Read 5 papers related to AlexNet, ZFNet, GoogLeNet, VGG, and ResNet, and reproduced their codes;
- Completed the annotation task of more than 500 image datasets

### Introductory Scientific Research Program

06/2021-07/2021

- Had a preliminary understanding of scientific research;
- Became proficient in LaTeX by completing 5 large assignments;
- Read and completed a paper summary report, and mastered the writing method and framework of it

## INDIVIDUAL PROJECTS

### Mini Program Based on Django

10/2021-12/2021

- Drew the UML diagram and conducted Requirement Analysis;
- Used Django as backend framework, MySQL as database;
- Employed the Agile development method, conducted the version control with Git/GitHub and logged everyday progress with the CSDN blog;
- Conducted Standup meetings every day and monitored project daily progress using the burnout diagram

### Mask Detection System Based on Raspberry Pi

04/2021-06/2021

- Implemented a mask detection system by the application of OpenCV, MobileNet, and temperature detection module;
- Used Git/Github to conduct version control and project management

## REWARDS & PUBLISHED PAPER

- **Silver Medal** of Kaggle: Google Brain - Ventilator Pressure Prediction (Top 5%);
- **Second Prize (Fujian Province)**, Contemporary Undergraduate Mathematical Contest in Modeling;
- **Thriving Prize (National-level)**, Contemporary Undergraduate Electrician Mathematical Contest in Modeling;
- **Third-class Scholarship**, Fuzhou University(twice);
- **Third Prize (S Award)**, MCM/ICM (Mathematical Contest In Modeling & Interdisciplinary Contest In Modeling);
- **Outstanding Award in School Competition**, "Challenge Cup" College Students' Entrepreneurship Plan Competition;
- **Outstanding Student Librarian**, Fuzhou University

## SOCIAL PRACTICE

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### Youth Training Camp, Byte Dance (Online)

07/2022-08/2022

- Engaged in big data technology and completed a simple distributed computing system with SQL support;
- Participated in several live classes, community discussions, and project practice, and completed MIT 6.824

### Y Combinator Startup School (Online)

05/2022-06/2022

- Learned the entrepreneur's ideas, how to find a partner and plan an MVP, and how to make plans for the future

### Software Development Intern of Shandong University Tianyuan Digital Industry Research Institute, Shandong Tianyuan Information Technology Group

03/2022-06/2022

- Participated in the development of GIS systems based on Spring Boot, Vue, and MySQL;
- Completed an e-commerce website based on Servlet, JSP, JDBC, MySQL, and Tomcat;
- Contributed machine learning pipeline implementation of image segmentation tasks to the company's code base

## EXTRACURRICULAR ACTIVITIES

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### Volunteer Leader of School Library, Fuzhou University

11/2019-07/2022

- Responsible for the daily operation;
- As a volunteer leader, responsible for volunteer management, message communication, and task allocation

### Volunteer English Teacher of the Online Tutoring Activity

04/2020

- A one-to-one activity jointly organized by Chiling Public Welfare Library and Fuzhou University;
- Mainly responsible for English teaching, taught students to memorize words, phonetic symbols, and grammar

## SKILLS & HOBBIES

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- **English Language:** IELTS (7.0)
- **Programming Skills:** Java | Python | C/C++ | MATLAB | Mathematica | Verilog
- **Others:** Linux (Ubuntu) | SPSS | Pytorch | TensorFlow | Scikit-learn | Pandas | NumPy | OpenCV | Django | Spring Boot | Markdown | LaTeX | TCP/IP | MySQL
- **Hobbies:** Reading | Watching Movies | Doing sports