

# Zhaoyu Zhang

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## Education

### University of Manchester

Manchester, UK

MENG IN COMPUTER SCIENCE, EXPECTED FIRST-CLASS HONOURS

Sep. 2018 - June. 2022

- Relevant Modules: AI and Games, Computer Vision, Text Mining, The Internet of Things, Software Security, Data Engineering, Algorithms and Complexity, Databases, Logic and Modelling, Object-oriented Programming, Mobile System, and Cryptography.

### International Division of Hubei Wuchang Experimental High School

Wuhan, China

A\* IN A LEVELS

Sep. 2015 - June. 2018

- A\* in Further Mathematics, A\* in Chemistry, A\* in Mechanics, A\* in Statistics, A in Physics, A in Core Mathematics.

### Wuhan Wuluolu Middle School

Wuhan, China

ZHONGKAO (GCSE EQUIVALENT) 462/550, 108/120 IN MATH, 114/120 IN ENGLISH

Sep. 2012 - June. 2015

## Work Experience

### iFLYTEK Co., Ltd.

Wuhan, China

PROJECT APPLICANT AND DEVELOPER INTERN

Jul. 2021 - Sep. 2021

- Responsible for project declaration, development, docking, acceptance, and launch, etc.
- Conducted research on the development of digital economy industry and optical fiber interception.
- Using librosa, WebrtcVAD, Pytorch and UIS-RNN classification algorithms under Python, the speech extraction under the TIMIT corpus was completed, including basic speech noise reduction, framing, separation, classification, recognition, etc.
- Speech extraction accuracy: 98%, Speech recognition accuracy: 97% (Test set: Texas Instruments, MIT, SRI International TIMIT continuous speech corpus)

### Hubei Provincial Foreign Affairs Office

Wuhan, China

ASSISTANT AT VISA SERVICE CENTER OF THE MINISTRY OF EUROPE

Jun. 2019 - Sep. 2019

- Coordinated and arranged more than 10 colleagues to receive scholars from Babes-Bolyai University in Romania for a week-long friendly exchange activity in Hubei Province
- Completed bilingual translation of 6 relevant work documents and reports in both Chinese and English
- Use Excel and PPT to participate in planning and organize the itinerary during the Han Dynasty. List the optional information of 30+ attractions and projects, and select the best plan according to factors such as time, personnel and weather, which is adopted by leaders

## Projects

### Optimizing Minimal Counterexamples

Manchester, UK

SOLE DEVELOPER

Mar. 2022 - May. 2021

- Help users better understand bugs (Identify and locate errors) in java programs by reducing the numerical size of counterexamples generated by java BMC (Bounded Model Checker)
- The feasibility of reducing the counterexample value was verified by using two java BMCs, JPF (Java PathFinder) and JBMC (Java Bounded Model Checker)
- Configure and test various error types such as deadlock, race conditions, overflow, underflow in the gradle environment
- All benchmarks in SV-COMP were checked by employing JBMC

### Road Tracking in Aerial Images

Manchester, UK

SOLE DEVELOPER

Sep. 2020 - Apr. 2021

- Without the use of GPS, by analyzing the satellite images returned by the drone, extracting useful information from it to establish the scope of the drone's activities
- Using Jupyter Notebook to implement OpenCV, Keras model and U-Net machine learning algorithm under Python to locate the drone
- Accuracy is around 100 meters for well-trained models

### Stendhal Local Enhancement

Manchester, UK

IMPLEMENTER

Nov. 2019 - May. 2020

- Added new cheating commands in the Stendhal game: teleportation, resurrection, invincibility, auto-following, auto-pathfinding
- Expanded some maps on the basis of the original game: added two new accessible scenes
- Modified some of the original There are attributes of items: life recovery of food, attack power of weapons, defense power of clothing, etc.
- REST API/TDD and Web/SPRING frameworks in Java are used

## Skills

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**DevOps** Git, CR, Github Actions

**ML** Pytorch, Numpy, Matplotlib, Jupyter, Pandas, TensorFlow(Keras), Scikit-learn.

**Programming** Python, Java, SQL, HTML/CSS, LaTeX, OpenCV

**Language** Chinese (Native), English (Fluent)

**Other** Markdown, command-line and various IDE like VSCode and JetBrains.