Wenqing Zong

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Education

2021 - Present	**Imperial College London**, *MSc.Advanced Computer science*. First Class Expected
2018 - 2021	**The University of Manchester**, *BSc.Artificial Intelligence*. Top 10% Graduate
2017 - 2018	**INTO Manchester**, *Foundation Year*. Top 10% Graduate

Experience

Jun 2021 - Aug 2021 — **Research Internship**, *AgCIM Research Centre*, Guangzhou, China.
- Completed image-based rural area hazard detection system using Pytorch. Core functions include object segmentation and road category classification.
- Used MegaDepth network to improve the accuracy of road width calculation module in City Information Modeling (CIM).
- Work highly recognized by my colleagues.

Skills

Languages	Python, familiar with Java and other C-like
Frameworks	PyTorch, Numpy, familiar with Tensorflow, Spring, OpenGL
Utilities	Anaconda, IDEA, Jupyter Notebook, Git, Markdown, LaTeX
Communication	English(fluent), Chinese(mother language)

Projects

May 2022 - Present — **Transfer Learning on Brain Metastasis Detection**, *Dr. Matthew Williams, Imperial College London*.
- Apply transfer learning on CT scans to detect Brain Metastasis.
- On going project.

Oct 2020 - Apr 2021 — **Procedural Terrain Generation**, *Dr Ke Chen, The University of Manchester*.
- Used Perlin noise to procedurally generate terrains for modern RPG games and simulated hydraulic erosion process to increase playability.
- Used Spatial GAN model to generate realistic terrain for flight simulation type game.
- First Class Final year project (Undergraduate).

Oct 2020 - Dec 2020 — **N Body Movement Simulation**, *Self-motivated*, [Code].
- Built a particle system to simulate the N-Body movement problem in OpenGL.
- Used PyQt framework to provide a powerful GUI where users can adjust all parameters of each particle.

Oct 2020 - Dec 2020 — **MCTS Board Game AI**, *Team*, [Code].
- Participated in a team of 4 to develop an AI bot to play a board game, Kalah.
- Our bot was based on Monte Carlo Tree Search with some improvements such as Early Payout Termination, MCTS-Minimax hybrid.
- The bot beats 37 bots submitted by other teams (51 in total) in a tournament.

Jan 2020 - May 2020 — **EventLite Website**, *Team*.
- Lead a team of 6 people to develop a website, EventLite, in Spring framework.
- Set up and maintained the website database.
- Code is maintained in a high standard with unit tests and security tests of each function we implemented.

Nov 2019	**Face Recognition**, *Self-motivated*.
	○ Trained a model by minimising the $L2$-regularised sum of squares loss using the normal equations.
	○ Achieved 92.5% accuracy when classifying 40 people.
Oct 2019 - Jan 2020	**Stendhal Game**, *Team*.
	○ Worked in a group of 7 to maintain an open source game in GitLab.
	○ Fixed bugs raised by players and added JUnit tests for them. Introduced new features based on the original game and refactored some hard-to-read legacy code.
Jan 2019	**Yes/No Voice Recognition System**, *Self-motivated*.
	○ Built a voice recognition system to distinguish "yes" and "no" said by different people with different accent.
	○ Originally this was a naive Bayes classifier, optimised with Markov chain and hidden Markov Model later on. Achieved 89% testing accuracy.
Jan 2019	**Robot Localization System**, *Self-motivated*.
	○ Developed an automatic robot positioning system, which is based on Bayes probability theory.
	○ Achieve high positioning accuracy even when sensor readings maybe inaccurate, thereby reducing the probability of collision between the robot and obstacles.

Extra Curriculars

Sep 2019 - Jun 2020	**PASS Leader**, *The University of Manchester*.
	Helped several first year students in Peer Assisted Study Session, offering academic support and developed interpersonal skills.
Sep 2018 - Jun 2019	**Student Representative**, *The University of Manchester*.
	Acted on behalf of students to raise issues we concerned and suggestions to department staff, in order to make a positive difference not only on courses but also the whole CS department community.