Zhou Sha

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485 temporary graduate visa
Portfolio: www.zhousha.info

EDUCATION

University of New South Wales **Sydney, NSW**
Master of Information Technology 05/2024

- **Major:** Artificial Intelligence
- **WAM:** 74

University of Adelaide **Adelaide, SA**
Bachelor of Computer Science 07/2022

- **Major:** Artificial Intelligence
- **GPA:** 5.0

PROFESSIONAL & LEADERSHIP EXPERIENCE

University of Adelaide, 3D Hull Calculator **Adelaide, SA**
Code developer 08/2021 – 12/2021

In this project, we developed an application capable of loading and optimizing 3D models. The application reduces the vertex count while preserving the model's shape and allows for model segmentation through integration techniques. We initially worked with a C# framework but leveraged a convex hull algorithm available in Python for model optimization. By integrating these tools using language wrapping, we successfully minimized unnecessary points and maintained the integrity of the 3D structures.

- Participated in discussions and design solution with convex hull algorithm, used python wrapped in c#.
- Learned use GitHub for project management
- Learned some features of Visual Studio

University of New South Wales, Flappy bird deep Q learning **Sydney, NSW**
Optimizer 09/2022 – 12/2022

This project focused on optimizing a deep learning model for a reinforcement learning task. We started with an existing structure sourced from the web and made significant modifications to better suit our goals. Our primary objective was to identify the optimal parameters for the model, including learning rate, epsilon, batch size, image resolution, and optimization algorithms. Through extensive testing and fine-tuning, we achieved a final result where the agent was able to fly autonomously for more than ten minutes, demonstrating the effectiveness of our parameter optimization.

- Modified the model layers and hypermeters to make model fit better.
- Image data pre-processed.

University of New South Wales, Best Practice Medical **Sydney, NSW**
Code developer, Joint 09/2023 – 10/2023

This project involved developing a website for managing and checking appointments with General Practitioners (GPs). My primary responsibilities included writing efficient database queries to retrieve the necessary appointment information and implementing backend functionality using Python. I ensured that the queries returned accurate and expected results, and I integrated them seamlessly into the backend system, enabling reliable and smooth appointment management on the platform.

- Used SQL server to check query result.
- Use python to connect the database.
- Backend interface implement.
- Communicated with front-end developer.

University of New South Wales, Computer Graphic **Sydney, NSW**
Coding, Modeling, Scene, Designing 09/2023 – 10/2023

In this project, I developed an FPS game using Unreal Engine 5. I began by sourcing map layout designs online and constructing the game environment based on these designs. I also imported 3D models from various sources, customizing them in Blender to fit the game's aesthetic. Additionally, I used Unreal Engine's Blueprints system to implement game events, interaction logic, and material effects, ensuring a dynamic and immersive gameplay experience.

- Learned base class management.
- Solved models' issue.
- Animation
- Blueprint coding experience.
- Project management.

University of New South Wales, Machine Learning **Sydney, NSW**
Coding, Modeling 02/2024 – 04/2024

This project was part of the Berrijam Jam competition, where our goal was to design and develop a core model based on a provided framework. My responsibilities included contributing to feature extraction, implementing machine learning methods, and handling the complete function development. The final code was praised for being well-organized and thoroughly commented, reflecting the high quality of our work.

- Hyper-parameter tuning
- Machine learning theory

Portfolio **Sydney, NSW**
Full Stack 08/2024

I self-studied online to build and deploy my portfolio, which significantly enhanced my resume and showcased my skills. For this project, I utilized Next.js, a powerful React framework, to create a modern and responsive website. This experience not only improved my proficiency in web development but also

introduced me to advanced concepts such as server-side rendering, static site generation, and API routes. Through this project, I gained hands-on experience in crafting dynamic web applications and learned to tackle real-world challenges, deepening my passion for this exciting field of technology.

- Next.js
- Tailwind
- Typescript

SKILLS, ACTIVITIES & INTERESTS

Languages: English and Mandarin
Coding Languages: program language: C++ (3 years), Python (3 years), C (1.5 year), C# (1 year), CSS (5 months), JavaScript (5 months), Shell(3 months)

Skills: Computer System, Operating System, Artificial Intelligence, Computer Vision, Software structure, Machine Learning, Data Mining, SQL, Computer Network, OOP, Software Develop, LLM

Interests: AI modeling and training, 3D modeling, Game developing (UE with blueprint and Unity with C#).