Weijing Zhang

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SKILLS SUMMARY

- Programming Languages: Java, C#, Python, Javascript/typescript
- Game Development: PIXI.js, Unity3D, Gameplay Programming, UI Design, Scene Development, Character Design, 2D Art Creation, Procreate
- Machine Learning: TensorFlow Keras, PyTorch, Neural Network, Natural Language Processing (NLP), Subword Tokenization, State-of-the-art Transformer-based Model, SQL
- IDEs & Tools: IntelliJ, Eclipse, Unity, Visual Studio, VS Code, PyCharm, Jupyter, Git, SVN

EDUCATION

2022.09 - 2023.06 City University of Hongkong, Master of Computer Science **Hong Kong, China**

- **Core Courses:** Data Engineering, Fundamental of Machine Learning, Natural Language Processing, Computer Graphics, Virtual Reality Tech & Apps, Cloud Computing

2017.09 - 2022.05 McGill University, Bachelor of Software Engineering **Montreal, Canada**

- **Core Courses:** Object-Oriented Programming in Java, Fundamental of Computer Graphics and Animation, Software Engineering, Database Management

WORK EXPERIENCES

2023.07 - 2023.09 Kotoko.ai, Intern frontend Gameplay Developer **Shanghai, China**

- Implemented UI elements and layouts using Typescript, with PIXI.js, PIXI-ui and PIXI-layout based on the design from the artist.
- Constructed a UI framework, standardized the process of loading resources and displaying or removing UI elements from game scene.
- Designed a singleton audio manager class to play and adjust different sounds in game, using Babylon.js.

2021.05 - 2022.01 ZLONGAME, Intern unity Gameplay Developer **Shanghai, China**

- Designed and implemented a dynamic character progression system in Unity, collaborating with a game designer and artists.
- Developed a strategic, fast-paced Active Time Battle system for a JRPG using Unity.
- Improved productivity by 5% via automating the concatenation of character timelines and significantly.
- Implemented a custom Unity script to automate the adjustment of character sizes and camera positions within battle scenes, ensuring consistent scaling, optimized visual framing, and minimized interaction bugs.

PROJECT EXPERIENCES

2022.09 - 2022.12 Financial Machine Translation, City University of Hong Kong **Hong Kong, China**

- Crafted PyTorch scripts to transform purified UN-parallel raw data into a PyTorch dataset, targeting the translation of Chinese financial & technical documents into English.
- Employed a variety of Subword Tokenization algorithms, including BPE, Unigram Language Model, and WordPiece, to perform tokenization.
- Fine-tuned pre-trained seq2seq models (T5, BART, MT5, MBART of different sizes) using Hugging Face APIs.
- Achieved a Sacre BLEU score of 20.9 after modifying generation strategy to improve the accuracy for translating numbers and financial terminologies.

2020.09 - 2021.04 Haptic Dance Shoe (Capstone Project), McGill University **Montreal, Canada**

- Collaborated with a team of three on a project aimed at developing shoes that analyze user movements and provide haptic feedback to aid in learning dance.
- Collected data from a professional ballet dancer, casual dancers, and novices using 4 FSR and 1 IMU sensor installed on the dancers.
- Utilized TensorFlow Keras to implement a two-layer neural network model, training the data collected from the sensors with the professional dancer's data as the target.
- Achieved over 90% accuracy in predicting whether a dancer has previous dance experience.

EXTRACURRICULAR ACTIVITIES

2021.01 - 2021.01 Tree Promises to Rita, Global Game Jam 2021 **Montreal, Canada**

- Developed a narrative strategy game where player choices dynamically alter character arcs.
- Leveraged Unity3D to design and implement the game's UI, focusing on enhancing player engagement and interaction.
- Utilized Procreate to design characters and create 2D art assets, enriching the game's visual storytelling.
- Collaborated with a fellow programmer to translate narrative scripts into functional game logic using Unity's scripting engine.

2020.01 - 2020.01 24.00PM, Global Game Jam 2020 **Montreal, Canada**

- Developed an RPG game featuring a main character composed of various machinery parts.
- Collaborated on story design and game mechanics, creating a unique gameplay experience where players collect parts to customize their characters for different battles.
- Utilized Unity3D to develop the dress/part-installation scene, implementing interactive elements and character customization features.
- Served as a 2D artist, designing characters that enhanced the game's narrative and visual appeal.