Amirali Monjar, Game AI Developer

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PROFILE

Dedicated game developer with three years of industry experience, specializing in gameplay programming, Shader development, And physics programming. Eager to learn but experienced with the latest cutting-edge development tools and procedures.

Websites and socials: Portfolio, Github, LinkedIn

EDUCATION

Jan 2023 — Jan 2024

MSc. Game Developement, Kingston University (Distinction) — London

- Machine Learning: Applied techniques for AI in games, including reinforcement learning and pathfinding algorithms.
- Unity and Shader Programming: Built immersive 3D environments and enhanced visual effects.
- Real-time Multiplayer Game Design: Developed and implemented network architecture and gameplay mechanics for smooth online experiences.

Sep 2017 — Jun 2022

BEng. Computer Engineering, Shahid Beheshti University — Tehran

EMPLOYMENT HISTORY

Jun 2023 — Present

AI Research Assistant, Kingston University of London — London

- Utilized Python and TensorFlow to design and implement a deep learning model for estimating 3D poses from 2D video frames.
- Employed LSTM networks to capture temporal dynamics and GANs to generate realistic 3D pose representations.
- Trained the model on the Human3.6M dataset, achieving the MPVE score of 40.3 in real-time performance.
- Optimized model architecture and hyperparameters for efficient inference on constrained hardware

Jul 2021 — Sep 2022

Backend Developer, Rahnema College — Tehran

- Implemented microservice architecture using Java Spring, Docker, Kubernetes, GraphQL, and AWS for high performance and flexibility and Developed backend services for user management, content delivery, course progress tracking, and real-time communication with over 100,000 students.
- Utilized Websockets to enable real-time features and interactive learning experiences.
- Collaborated with cross-functional teams (front-end, DevOps) to deliver a seamless and engaging online learning environment. Website Link

Feb 2021 — Jul 2021

Junior Gameplay Programmer, Cafe Bazaar — Tehran

- Designed and implemented core gameplay features, including ball physics, collision detection, cue control, and scoring systems
- Built real-time networking infrastructure using NodeJS to facilitate seamless multiplayer interactions,Optimized game performance for low latency and responsiveness.
- Created dynamic AI opponents with varying difficulty levels to provide engaging challenges for solo players.
- Collaborated closely with game designers and artists to iterate on gameplay mechanics and deliver a polished final product. Store Link

Jul 2020 — Feb 2021

Junior Gameplay Programmer, Alphatik — İstanbul

- Implemented core gameplay features for a third-person shooter within a persistent online world, exceeding 1 million downloads across platforms.
- Created immersive in-game systems for matchmaking, player progression, and social interaction and collaborated with cross-functional teams (design, art, QA) to deliver a polished and successful mobile MMO shooter.
- Designed and built real-time network infrastructure using Photon to facilitate seamless player interactions and synchronization. AppStore Link

SKILLS

- **Game Development:** Gameplay Programming, Shader programming, Physics programming (Nvidia PhysX), Game Engines (Unity, Unreal, Godot), 3D Geometry, OpenGL, Game AI, Procedural Game content Generation, Blender.
- **Programming Languages:** C/C++, Java, C\#, Python, JavaScript, Closure.
- **Software development**: Graphics (OpenGL, DirectX, Vulkan), Docker, Kubernetes, CI/CD, Testing (GoogleTest, JUnit, MSTest)
- **AI and Machine Learning:** Tensorflow, Keras, Pytorch, Pandas, Numpy, Sklearn, Matplotlib, Seaborn,

NOTABLE PROJECTS

May 2023 — Jan 2024

Enchanted Realms (Master's Body Of Work)

- Geo-Location Game: Transformed real-world locations into an immersive fantasy realm using Mapbox API for location data and wave collapse function for dynamic map generation.
- Procedurally generated content: Generated unique quests for each player based on their location and preferences utilizing the ChatGPT API, bringing a deeper level of immersion and engagement.
- Development Stack: Utilizing Unity, GAN models, AR development, Grammar based procedural generation, Pathfinding algorithms, Mapbox API, and ChatGPT API integration.
- Demo Link

Sep 2023 — Dec 2023

Mage Hand

- VR Action adventure: Built a VR world powered by Unity and Meta Quest 2, Where players can cast spells using hand gesture recognition.
- Development Stack: Unity, Meta Quest 2 kit
- User-Centered Design: Prioritized intuitive controls and responsive gameplay mechanics to ensure a seamless and enjoyable VR experience for players of all levels.
- Demo Link

Oct 2021 — Sep 2022

AnimateLy (Bachelor's Thesis)

- Real-time Animation from Video: Developed a deep GAN model that converts live video feed into animated movements for a rigged 3D character, enabling real-time interaction and expression.
- Advanced pose tracking: Employed MPII pose estimation libraries and LSTM networks to accurately capture and interpret human movement from video data in real-time.
- Technical expertise: Demonstrated proficiency in advanced deep learning frameworks (Python, TensorFlow, PyTorch) and GPU acceleration (CUDA) to train and deploy the model efficiently.
- GitHub Link