Muhammad Abdul Rehman Khan

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Professional Summary

Tenacious and innovating Software Engineer eager and passionate about learning and growing. I began game development and I found immense joy in creating things, be it games or otherwise, so I pursued many avenues of development as I did not want to be limited to games. A technology-agnostic developer, I love problem solving and creating immersive digital experiences. As a lifelong student, I am eager to improve my technical and artistic skills, with a desire for new opportunities.

Key Skills

- Software Development (C++, C#, Obj-C, JavaScript, Dart)
- Game Development (Unreal Engine, Unity, Godot)
- Problem Solving & Debugging
- Creative Thinking & Innovation
- Cross-Platform Development
- UI/UX Design for Interactive Applications
- Version Control Systems
- Continuous Learning & Self-Improvement
- Team Collaboration & Communication

Professional Experience

Associate Software Engineer
Synapsify | Islamabad, Pakistan | January 2024 – Present

- **Took ownership of the Synapsivate Flutter Application**, quickly implementing urgent features after the previous developer's departure to meet tight deadlines.
- **Enhanced the Flutter application** by integrating API calls, refining UI components, and improving the overall user experience.
- **Refactored the existing Flutter codebase**, implementing proper state management and improving maintainability.
- **Led the development of the company website**, coordinating with team members to gather content and ensure a unique yet consistent design across all pages.
- **Worked closely with management** to align website functionality and design with company objectives.
- **Currently developing an AR application in Unity**, building a custom Objective-C plugin for running Mediapipe (Hand Detection) and DepthAnythingV2 (Depth Estimation).
- **Integrating AR Face Tracking** with depth estimation to create an immersive AR game experience.

Associate Game Developer
Synapsify | Islamabad, Pakistan | September 2023 – December 2023

- **Researched and evaluated multiplayer frameworks** for the Unity-based Synapsiverse Virtual Environment, ultimately selecting Fish Networking as a cost-effective, open-source alternative.
- **Implemented multiplayer functionality** using Fish Networking, leveraging documentation to overcome the lack of tutorials and ensuring smooth real-time interactions.
- **Developed a direct messaging system** that utilized the game server for message redirection, enhancing in-game communication.
- **Engineered a custom WebRTC plugin** for voice chat, enabling microphone support in WebGL builds, which Unity does not natively support.
- **Optimized voice chat functionality** by integrating WebRTC with the game server instead of using Firebase, significantly reducing company expenses.
- **Documented the custom JavaScript WebRTC plugin**, ensuring seamless future maintenance and knowledge transfer within the company.

Freelance Game Developer & QA Tester
Self Employed/Independent Work | July 2022 – September 2023

- **Cold contacted indie developers** to offer assistance in game development and testing, building professional relationships and expanding industry experience.
- Assisted indie developers with **game development and testing**, providing feedback on gameplay mechanics, bug fixes, and optimization.
- Collaborated with developers to **debug and improve game functionality**, ensuring smooth performance across different platforms.
- Provided **quality assurance (QA) testing**, identifying and reporting game-breaking bugs, enhancing user experience.
- Acted as a **Dungeon Master for a Dungeons & Dragons campaign**, designing engaging narratives, balancing gameplay mechanics, and creating immersive experiences for players.
- Developed a passion for **experience-driven game design**, honing world-building and storytelling skills applicable to game development.

Teaching Assistant
National Textile University | Faisalabad, Pakistan | November 2022 – February 2023

- Assisted students in **computer lab sessions**, providing guidance on programming concepts and debugging code.
- Supported the professor by **answering student queries** and clarifying course material during lab sessions.
- Helped maintain a structured learning environment by **monitoring student progress and troubleshooting technical issues**.
- Provided **one-on-one support** to students struggling with assignments and lab exercises.
- Assisted in **grading assignments or reviewing coursework**, ensuring accuracy and fairness in evaluations.

Education

BS Software Engineering
National Textile University | Faisalabad, Pakistan | 2023 | 3.69 CGPA

A Level
Faisalabad Grammar College | Faisalabad, Pakistan | 2019

O Level
LaSalle High School & College | Faisalabad, Pakistan | 2017

Self-Learning

- **Software Development** – Learned through formal education, documentation, developer forums, StackOverflow, and YouTube.
- **Game Development** – Self-taught through documentation, developer forums, StackOverflow, and YouTube.
- **Multiplayer Game Networking** – Researched and Implemented FishNetworking for Unity.
- **AR Development & Computer Vision** – Learning Mediapipe and DepthAnythinV2 for AR applications.

Projects & Achievements

- Lightseeker (Game – 3D ARPG)
- AR Event Stewardship (Mobile App)
- Spacecapade (Game – Top-Down Shoot em' up)
- Synapsiverse (Game – 3D Virtual Experience)
- Synapsivate - HRM (Mobile App)
- Synapsify (Website)
- Blockchain Real Estate App (Web App)
- Text Summary Generator (Python)
- Distraction Model (NetLogo)

Technical Skills & Tools

- Unity
- Unreal Engine
- Godot
- Flutter
- MERN Stack
- Figma
- Problem Solving
- Creativity
- Time Management
- Curiosity

Languages

- English – Fluent
- Urdu - Native