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Summary

Experienced Software Engineer with a strong background in backend development, game development, AI technologies, and smart contract implementation. Proficient in languages such as **C++**, **C#**, **Java**, **TypeScript**, and **Solidity**, with a passion for core programming and game development. Adept at developing APIs, managing databases, and implementing microservices. Proven ability to work with cutting-edge technologies and deliver efficient solutions in various domains including game development, fintech, blockchain and metaverse development.

Technical Skills

- **Programming Languages:** C++, C#, TypeScript, Python, Solidity, Java
- **Game Development:** Unity, Unreal Engine
- **Backend Development:** Node.js, .NET Core
- **Tools & Technologies:** Houdini, Docker, Postman, Git, Github,
- **Databases:** MySQL, PostgresSQL, MongoDB, Oracle, Redis
- **Blockchain:** Ethereum, Polygon, BNB, CORE, BASE, LayerZero
- **Smart Contracts:** ERC-20, ERC-721, ERC-1155, ERC-404
- **APIs & Microservices:** Design, development, and management
- **AI Technologies:** Room tracking, body tracking, hand tracking using OpenCV, MediaPipe, Socket Learn, Pandas, HuggingFace and Tensorflow

Professional Experience

Pentagon Games

Software Engineer & Lead Smart Contract Developer
Aug 2023 – Present

As an early employee at Pentagon Games I have a small share in it and I am proud that we came 1st in Startup World Cup 2024 which was held in Dubai.

- Developing a Metaverse on **Unreal Engine 5** using **C++** and **Houdini**
- Developed AR applications for room scanning, body tracking, and hand tracking using ARFoundation, **OpenCV** and **MediaPipe** with **Unity**, C++ and C#
- Developing APIs on **.NET C#** and **Node.js Typescript** for leaderboard functionalities and using **PostgresSQL** as database
- Leading the development of smart contracts for various games, including cross-chain and staking contracts using **Solidity**
- Contributing to 2D game IPs such as Chain Arena and Chain Guardians https://pentagon.games/

Ethermon.io

Software Engineer
Jul 2021 – Jul 2023

Started my learning of my blockchain from here actually and developed alot of smart contracts and a fullstack developer of the team

- Developed 3D/2D games on **Unity** using **C#**
- Managed backend development with **Node.js (TypeScript)** and **MySQL**
- Created, maintained, and deployed smart contracts on Polygon and Ethereum using **Solidity**
- Implemented interaction with smart contracts using **Web3.js** and **React.js**
- Developed AR-based games allowing in-game character interaction via mobile browsers using Unity and C#
- Launched cross-platform gameplay in Decentraland and contributed to various game modes and features

TPS WorldWide

Software Engineer
Jun 2021 – Sept 2021

Spent brief amount of time in this fintech organization but I worked on alot of things in this period as I was hired from Software Engineer II because of my previous experience and I already knew C++ and Node.js which they required.

- Transitioned database systems from **OracleDB** to **Redis** to enhance transaction speed
- Developed and maintained fintech applications using **C++** and **Node.js**
- Contributed to digital payment solutions for banks, telecoms, payment processors, and merchants

Inzilo

Backend Developer
Dec 2019 – May 2021

Actual start of my journey as a backend developer my role wasn't limited to just Node.JS it included different stack like win app which I had already experience in from my University period as they focused alot on C# .NET and Winform stack which helped alot

- Developed web-app backends using **Node.js** and **TypeScript**
- Created desktop applications using WinForms and **C#**
- Designed efficient APIs and managed databases with **MySQL (TypeORM)** and **MongoDB (NoSQL)**

Education

Karachi Institute of Economics & Technology, Karachi —
BS in Computer Science

Aug 2017 - Dec 2021

Projects

- **Room Tracking (Pentagon Games):** Created a room model after scanning the room, allowing users to map the digital model onto the physical room so characters can detect and interact with objects like beds and chairs.
https://apps.apple.com/gb/app/hexr/id6502117978

- **Metaverse on Unreal Engine 5 (HexagonCity - Pentagon Games):** Responsible for gameplay programming and creating logic using C++, such as movement interaction

with assets and fetching data from the backend and developed procedural buildings and land using Houdini Engine Plugin for Unreal.
https://hexagon.city/

- **Hand Tracking Using MediaPipe(Pentagon Games):** Creating Hand Tracking plugin using **OpenCV 4.1** and **MediaPipe** with C++ for Unity, overcoming limitations such as using **Bazel** and **Tulsi** on a Mac M1. I created this plugin using C++ so it can be used for Android as well later on as of right now its for iOS.

- **Motion Capture (MoCap) Application (Pentagon Games):** Developed using Unity AR Foundation and ARKit, generating animations based on human movement without advanced motion capture technologies, using C#.
  - Not released for public

- **API and Microservices (Ethermon):** Developed APIs and microservices for staking, NFTs, and airdrop functionalities to handle frequent web3 call failures in public blockchains.
  - Site is down as its got acquired by Pentagon Games but can google it still shows alot of content.

- **AI NFT Project:** Trained a large language model (LLM) to convert text to images for an AI NFT project, utilizing libraries such as Pandas, Scikit-learn, and **HuggingFace**.

- **Smart Contract Development (Pentagon Games and Ethermon):** Used Solidity and **Hardhat** for deployment on EVM and TVM-based blockchains, incorporating **LayerZero** for cross-chain bridging.

- **Backend Development (Inzilo):** Developed the backend for Inzilo, a CRM application used for delivery services, employee status tracking, and POS for shops and salons. Created a chat support system using WSS, which interacts with POS hardware devices like StarMicronics. The **WSS** on the **WinForm** application communicates with the backend Node.js, notifying the owner of successful payments on the web app and storing purchase information. Technologies used include Node.js, TypeScript, MongoDB, and C#.
  - Company shutdown due to COVID in the end of year 2021, still have the private source code on gitlab and all contributions can be viewed, cannot public it as its someones else property.

- **Deception Aura (Final Year Project):** Final year project involving Augmented Reality to visualize products or buildings under construction in real-time via mobile.
  - https://github.com/syedMohib44/Deception-Aura
  - https://github.com/syedMohib44/Deception-Aura-Web

- **Save Me (Personal Game):** A minimalistic, hyper-casual, and challenging game designed to be highly addictive.
    - https://play.google.com/store/apps/details?id=com.DevelopersVoid.SaveMe

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Additional Information

- Passionate about game development and core programming
- Prefers using C++ for game logic over Blueprints in Unreal Engine
- Experienced in deploying and managing smart contracts and blockchain solutions
- Developed procedural components from scratch and Houdini.
- Skilled in AI technologies such as room tracking, body tracking, and hand tracking using OpenCV and MediaPipe