Kalpan Agrawal | Game Developer

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Skills

Programming Languages: C++, C#, Python, Unreal Visual Blueprint
Software: Unity, Unreal Engine, Davinci Resolve
Platforms: Windows, Android, Meta Quest, HTC Vive, Pico, Varjo, HoloLens 2

Experience (Cumulative: ≈ 4 Years)

Experience Design Labs, NEU | *Jan 2023 – May 2023 (5 Months)*
Research Assistant for Unity VR Development | *Boston, MA, USA*

- Designed and developed a Unity VR Simulation with hand tracking for real-time interaction with a Virtual Robotic Workbench using C#, and C++. Used C++ to set up Game Logic, Mechanics and Gameplay Systems and Multiplayer connectivity.
- Collaborated with a research team of 30, achieving a gamified experience that boosted user interactions by 40% with a MuJoCo-based robotic environment on Unity's VR platform.
- Delivered an Immersive Industrial Work Simulation, leveraging advanced algorithms such as A*, predictive modeling, Occlusion Culling, and LOD optimization which contributed to an increase in task efficiency within the simulated environment.

Immersive Media Lab, NEU | *Sept 2021 – Dec 2022 (1 Year, 4 Months)*
VR Developer | *Boston, MA, USA*

- Developed Mini-projects using Unity3D, C#, and C++ on various AR and VR devices like Quests Pro, Varjo VR-3, Pico Neo 4. Ensured 60+ FPS performance on low-end devices, improving usability.
- Proficiently utilized various VR SDKs including Oculus, Varjo, and Pico Neo SDKs to ensure seamless compatibility with different VR headsets, enhancing user experience and accessibility.
- Implemented system optimizations using algorithms like Occlusion Culling and LODs, enhancing game performance by 30% without sacrificing artistic vision.
- Conducted in-depth research on VR/AR platforms and technologies, staying up to date with emerging trends and best practices.

Al Mulla Exchange Group | *(2 Years)*
AI Engineer | *Sept 2020 – Aug 2021* | *Mumbai, Maharashtra, India*

- Led a team of junior AI engineers, overseeing the software development life cycle of 3 Long-term Python ML-AI and C++ projects, focusing on improving GUI, User Experience and Customer Support Experience.
- Introduced Python-based ML projects such as a Face Recognition service that improved user login accuracy and a Smart Chat-bot service that enhanced customer support response time.
- Implemented machine learning models like Random Forest and Neural Networks, elevating the success rate of automated decisions by 30%.

Software Developer at Al Mulla Group | *Sept 2019 – August 2020*

- Engineered Production-level Web-APIs using C++, JavaScript, and SQL Server databases, increasing server response time by 20%.
- Deployed and integrated software from the team, updating integration and deployment scripts that reduced build failures and Facilitated uptime during software deployments for optimized continuous integration.
- Collaborated with product managers to devise a 2-year roadmap, guiding a team of 40 and helping in bug-fixing, feature completion and team's alignment with long-term goals.

Technowings | *June 2018 – July 2018 (2 Months)*
Software Intern | *Pune, Maharashtra, India*

- Assisted in the development and maintenance of C++ applications, achieving bug-free code under the mentorship of senior developers.
- Collaborated with cross-functional teams to identify and resolve software bugs and other technical issues.

Education

M.S. in Game Science and Design (GPA: 3.71)	Northeastern University	*2021 – 2023*
B.E. in Computer Engineering	University of Pune	*2015 - 2019*