

Vatsal Ambastha

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WORK EXPERIENCE

PLAKC™ (The Zero Games Pvt.
Ltd)

Jan 2016 — Present

Unity3D Lead

Working on PLAKC™, a dynamic in-game advertising solution that lets developers monetize their games and helps brands reach game players.

Upon joining, I kicked off a redevelopment of the PLAKC Unity3D SDK for our partnering game developers. On a daily basis, it enables millions of seconds of viewership of ads inside 3D game environments.

My job involves making a technically robust Java and C# SDK, a role covering all aspects of code quality, review, documentation, building, packing, release, support as well as product development roles.

Firexit Software Pvt. Ltd.

Jan 2011 — Present

Director

Formed and managed a team of developers creating successful games like Speed Street: Tokyo and XPro Rally. Firexit also undertook client work and worked on monetization and prototypes for analytics and engagement products.

The company is presently my independent business working in several industries such as defense, visual arts, gaming, media R&D and AI as well as consulting on code planning, reviews, best practices and refactoring.

Clientele is spread all over the globe with names like PlusOne, Juspay, Games2Win, Heinrich Hertz Institute (Berlin).

RECENT PROJECTS

Optimised VR Video Streaming: Worked with Cornelius Hellge from Heinrich Hertz Institute, Berlin to make optimised VR video streaming tech. The solution uses dynamic video up-sampling using real time vertex and UV manipulation. Result was a sophisticated solution operating on 8 dimensional data, achieving ~50% reduction of bandwidth use without reliance on FFMPEG or shaders.

Project Kalaa: A VR project showcasing concepts of quantum foam and consciousness using Perlin noise based real time mesh manipulation and Boid algorithms. Made for an exhibit installation in Peru. Runs on HTC Vive.

Project Kahaani: A project that merges AI and storytelling. Uses state based, Goal Oriented and Behaviour Tree AI to create a non deterministic simulation of human civilization and chaos. Inspired from the Live Simulations of Ian Cheng. Exhibited in Peru.

Project Khandar: A VR project based on Michael Brills' sketches commissioned for the symbolism for Waste Isolation Pilot Plant (WIPP), a radioactive waste disposal site in New Mexico, USA.

UniGOAP: An open source Goal Oriented Action Planning AI library based on the works of Jeff Orkin on F.E.A.R. Offers an alternative to state machine and behaviour tree based AI designs with several possibilities for implementing Utility AI.

UniCull: An open source project than aims to provide per mesh distance and occlusion based culling. Occlusion culling is presently operational but computationally un-optimal. Uses custom made coroutine APIs to do sparse raycasting over several frames.

UniGenVR: An open source framework for creating VR games and experiences in Unity without code. Used to make several client projects at Firexit Software and King's Orders, a short aesthetic VR experience.

UniFace: A Unity C# library for runtime manipulation of UV vertices using clustering.

UniPrep: A Unity library that extends the editor and Unity C# API to include more hotkeys, static extensions and custom coroutine APIs that improve upon Unity's default ones.

AirPeer: A WebRTC based P2P networking SDK for Unity. Uses a light weight signalling server and offers host migration as a failsafe ensuring persistently networked communication.

dotMe.xyz: An AI-powered digital diary that uses Natural Language Processing to track mental health of the writer using sentiment analysis and the Big 5 traits.

AirProc: An SDK for carrying out P2P asynchronous remote processing on mobile devices using a client-only SDK. Currently under development and unreleased. Further details non-disclosable.

Adrenet: A highly scalable, low latency, low redundancy, decentralised mesh network offering fast P2P messaging using neighbour broadcasts. Currently under development and unreleased. Further details non-disclosable.

PRIMARY
SKILLS

Tech And Tools : Unity, Blender3D, Photoshop, C#, Java, C/C++,
Platforms : AR, VR, Mobile, PC, Web
Roles : Development, Code Quality (Reviews, Architecture, Refactoring, Modularization, Emergence), Monetization, Analytics

EDUCATION

Bachelor Of Technology - Computer Science and Engineering 2012 — 2016
Manipal Institute of Technology

INTERESTS

Technical and business reading
Philosophy and psychology
Technical writing
AR/VR
Open source projects
Independent consulting