
Žarko Petrović

Unity & Multiplayer specialist



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Summary

Experienced Unity developer with strong engineering background and particularly deep understanding of multiplayer game development.

10 years Unity experience on large scale projects and ones on the bleeding edge of technology.

Broad knowledge, short stints in product management, game design and business, in addition to vast Unity and engineering experience.

Results-driven, goal-oriented, team player. A combination of life-long passion for engineering with empathy for creative and business leaders.

Career highlights

Tech-led a team that developed and ran a game with 1M DAU

Developed Unity tech that powered Top Eleven, Nordeus' blockbuster

As a studio founder led creation of a game that entered top 2% of retention and engagement

Developed custom networking code for a real-time arena battle game with 2M+ downloads

Implemented agar.io style networked gameplay that allows 100 players per server with cost-effective hosting

Experience

Senior Unity Developer / XGameFi

August 2023 - July 2024, Belgrade (Remote, Part-time)

Real-time multiplayer arena battle game, agar.io style but further expanded with more complex gameplay, better tech and better audio-visuals. I was the sole gameplay and multiplayer engineer from start to finish. Cross platform, mobile and webgl. Unity, Photon Fusion, Unity Game Server Hosting, Amazon Gamelift.

https://twitter.com/GAME_Xstro

- From concept to release-ready gameplay and infrastructure in 6 weeks
- 100 players per server running on modest cloud instances on Unity Game Server Hosting

Senior Unity Developer / Betsoft Gaming

September 2023 - July 2024, Belgrade (Remote)

Real-time multiplayer iGaming titles for WebGL. I was hired to put ongoing multiplayer development efforts under control and develop tech that will power all of the company's games. Built using Unity's suite of multiplayer technology and cloud services (Netcode for Game Objects, Game Server Hosting, Relay, Lobby, Matchmaker, Cloud Code, Cloud Save etc), Microsoft ASP.Net Core, Microsoft Entity Framework Core, NSwag Studio, PostgreSQL. https://youtu.be/2c5KHI_jLC0?t=194

- Basic scalable multiplayer tech that unblocked company's halted work on multiple games developed in just two weeks
- Complete tech that powers all games built in six months, and integrated into the company's flagship game. Effectively reduced development of future games to just UI and gameplay specifics.
 - Auto-scaling multiplayer backend
 - Custom matchmaking
 - Persistent player data storage
 - Industry-grade analytics platform
 - Industry grade security of all the services
- Mentored others in using the tech and wrote docs, tutorials and sample projects, rendering myself unneeded for developing of new games / using the tech

Unity AR Developer / oio

March 2023 - April 2023, Belgrade, Serbia

Sole Unity developer on an AR game built for Google to demonstrate usage of their new geospatial and semantics APIs on Android phones.

The project is called Mega Golf and is open sourced by Google:

<https://github.com/google-ar/demo-megagolf>

- Developed in 6 weeks, in spite of using fresh google tech and new for me Unity mobile AR tech
- Open-sourced by Google under their name demonstrating their endorsement of code quality

Senior Game Developer - Unity / Mega Particle

October 2022 - January 2023, Belgrade (Remote)

Multiplayer poker game in VR. I led the engineering side of a complete overhaul of the game with an MMO/Metaverse style future game vision in crosshairs while also maintaining the current live version. Responsible for the complete technical output of the team and the technical direction of the company. Tech included Unity, Nakama, Google Cloud Platform and Photon Server.

<https://www.meta.com/experiences/pokervr-pure-simple-poker/2257223740990488/>

- Designed and implemented complete engineering processes of the company
- Designed and helped implement most of the company's cross-team processes, like basic scrum methodology, collaboration between disciplines and OKRs
- Architected the complete future multiplayer infrastructure for industry-grade scalability, cost of operation and development time. Expected results were a ⅓ reduction of operational costs, complete auto-scalability with a development time of 6 months while maintaining the old game in parallel and without expanding the team

Unity AR/VR Developer/ ARVRtech

December 2021 - October 2022, Belgrade (Remote, Part-time)

I built a gamified education environment for Hololens 2 using Unity, for leading EU universities. The effort was part of a larger Conbots project.

<https://www.conbots.eu/>

- Greenlit and included into the conbots project

Real-time 360 video streaming of sports events combined with live sports betting for Oculus Quest2 using Unity.

<https://sb22.com/products/vr-sports-betting-platform-vr22>

- I built a prototype of the future product that enabled the company to raise the next investment round

Founder & CEO / Distill Games

January 2019 - September 2022, Belgrade

I founded a studio to bring my own product vision to market. Race Duels, a free to play multiplayer mobile racing game with groundbreaking car physics. I initially programmed the custom car physics engine, secured funding and recruited the team, then moved to producing the game and leading the studio. Tech included Unity, Java Spring Boot, PostgreSQL and AWS.

<https://youtu.be/Y4BSZvAxSng>

Game success highlights:

- Retention in the top 2% of the category (mobile racing)
- Daily play time in the top 5% of the category (mobile racing)
- Entered top 100 mobile racing

Full-stack Developer / Yboga

June 2018 - January 2019, Belgrade

I joined Yboga as a pillar of their new project, a mobile racing game. Initially I worked as a sole developer and contributed to game design, product strategy and market research. Tech-stack included Unity, Java, and AWS. The project was ultimately cancelled as not the right company fit.

- I quickly created engaging prototypes and helped the team iterate
- I helped find the right product positioning and design pillars to achieve a market fit
- Quick iteration time and market-aware focused design efforts led to an educated decision to cancel the game, saving the company a probable further failed investment

Technical Lead / Blacksmith Games Studio

July 2017 - January 2018, Belgrade

Mandatory indie engagement following a successful stint in a major gaming company. The product was an endless runner with a unique theme and art style. Besides developing the game in Unity I focused on product positioning/management, and making sure everybody pulled in exactly the same direction.

Network programmer - Unity / Nordeus

March 2016 - March 2017, Belgrade

Main client-side network programmer on Spellsouls: Duel of Legends (later rebranded to Heroic - Magic Duel), card battling MOBA for mobile. Raw TCP and UDP work inside Unity C#. A logical connection layer built on top with reconnection, unsent message buffering and resending and reconciliation of logical conflicts. Gameplay concepts like prediction and rollback implementation.

<https://www.youtube.com/watch?v=C0a2cDz7oQA>

- The game amassed 2M+ downloads with zero complaints about connection or any networking problems

Prototyping and pre-production / Nordeus

March 2015 - March 2016, Belgrade

Worked in a small, highly independent, self-organized team on prototyping and preproduction of greenlight candidate games. Besides implementing in Unity, focused on game design, product positioning and market research.

- The team received praise for work on a racing game that was deemed greenlight-worthy, but was cancelled together with dismantling the team, in favor of a new internal company organization structure

Software Development Engineer - Unity / Nordeus

May 2014 - March 2015, Belgrade

Part of a so called “all stars” engineering team that re-implemented Top Eleven in Unity. At the time Unity wasn’t capable of delivering complex UI and performance we needed so we built custom tech in Unity in order to build the game. My focus was mostly on the custom UI framework that scales across all size and resolution screens. After the game was shipped I also worked on porting it to Unity WebGL, where I architected and helped implement a custom network architecture to overcome networking constraints tied with WebGL.

<https://topeleven.com/>

- The team shipped the game in 7 months, beating even the most optimistic internal estimates
- Scalable UIs cut overall work needed in half
- The game shipped on WebGL, which was in beta at the time, shortly after the mobile launch, making it the first big game to ever ship on the platform.

Technical Lead / Nordeus

May 2011 - May 2014, Belgrade

Development of the Android version of the wildly successful Top Eleven football management game. Developed as an Android native app, no game engine used.

- I started as junior developer but quickly got promoted to tech-lead
- With a team of 3 students shipped the game in 9 months, and continued to update and maintain it for the next 2 years
- Game reached 1M DAU a few months after the release
- Success of this and the iOS version enabled Nordeus to become the world class company it is today

Education

Faculty of Electrical Engineering, University of Belgrade, Serbia / Master’s Degree, Computer Software Engineering

October 2005 - July 2011, Belgrade

9.5/10 GPA