

MARTIN PETKOVSKI

🇲🇰 Macedonia

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SUMMARY

Well-versed low-level engineer with specialized expertise in video games, focusing on gameplay programming within 3D environments. Expertise spans across multiple game engines, including Unreal Engine, Unity and CryEngine and multiple disciplines ranging from low-level systems to high-level game mechanics. Passionate about developing tools that help game designers.

SKILLS

Programming Languages

C++ C C# JavaScript Java PHP various scripting languages

Technologies

W DirectX Win32 Unreal Engine Blueprints Dear ImGui Qt Qt
.NET WPF FMOD Wwise JUCE HLSL SQL Firebase
Supabase MongoDB Perforce GIT SVN gtest
Steamworks Sentry Claude Code Copilot

Game Engines

Unreal Engine CryEngine Unity Game Maker
various proprietary engines

Software

Unreal Engine Editor Visual Studio FMOD Studio FL Studio
P4V Photoshop

EXPERIENCE

SENIOR PROGRAMMER

🇲🇰 KAMAI MEDIA, Macedonia 🇲🇰

2017 - present

Internship (KAMAI MEDIA)

2015

Gained experience in working with DirectX on a custom engine. Developed and implemented DirectX-based classes for managing 3D billboards and 2D sprites and modified the renderer loop to

support them. Published Episode 01 of the video game 🌐 **Sonder** on Steam.

🎮 **Crytek** External Partnership (Germany DE)

2017 - 2018

Collaborated closely with Crytek to develop game-balancing tools tailored for 🏹 **Hunt: Showdown** using CryEngine and VBA. Implemented a CryEngine extension which automatically parses and imports game design data from Excel files.

🎮 **Astek** Project (Turkey TR)

2018 - 2019

Engaged in close collaboration with Astek for the development of the Oculus Rift mining simulation game, **Black Diamond VR**, utilizing CryEngine semantics. Contributed comprehensively to the immersive VR experience, including resolving low-level rendering issues, developing a virtual assistant, and designing gameplay procedures.

🎮 **Airport Briefing** Project (Macedonia 🇲🇰)

2019 - 2020

Worked on developing a functional demo and editing tools for the Airport Briefing software in 🎮 **Unity**.

🎮 **Star Stable Entertainment** External Partnership (Sweden SE)

2020 - 2022

Technical assistance on developing core systems on the in-house engine of Star Stable Entertainment. Worked on creating tools for the custom animation system, developing a custom tools for the build versioning system in 🖥️ **Qt**, optimization of the version control system in the proprietary engine, etc.

🎮 **Intetic** Project (Macedonia 🇲🇰)

2023

Assistance on developing the sound on the game 🌐 **The Strange Story of Brian Fisher: Chapter 2**, both on the engineering side and on the creative side.

🎮 **Metaverse Game Studios** External Partnership (USA US)

2022 - present

Worked on 🌐 **Angelic: The Chaos Theatre**. Developed core gameplay systems including the camera, game modes, heroes, abilities and damage mechanics. Enhanced multiplayer functionality by developing key components of the multiplayer loop. Engineered an automated build pipeline for efficient distribution of game builds. Created foundational elements of the main menu, ensuring user-friendly navigation. Maintained game compatibility with the latest 🎮 **Unreal Engine** updates and integrated third-party plugins, resolving related issues.

🎮 **Historikal** Independent Project (USA US)

2025

Provided support by implementing a Cubemap to Equirectangular projection converter tool using pure C. Implemented tools that allow exporting and rendering higher-order ambisonic audio from Unreal Engine, to be used in the 360 video.

UNDERGRADUATE TEACHING ASSISTANT

 **Faculty for Information and Communication Technologies, Macedonia** 

2015 - 2017; 2021 - 2022

Supported multiple undergraduate courses including Algorithms and Data Structures, and Advanced Databases and Data Warehouses. Facilitated learning by conducting lab sessions and providing one-on-one tutoring to enhance students' understanding of complex concepts. Developed supplementary materials and exercises to reinforce theoretical knowledge with practical applications, improving student engagement and comprehension.

EDUCATION

MSC IN COMPUTER SCIENCE AND ENGINEERING

 **Faculty for Information and Communication Technologies, Macedonia** 

November 2021 - October 2022

GPA: 10.0/10.0

Thesis: Analysis and Application of State Machines in the Design of Branching Systems in Video Games

PERSONAL PROJECTS

NONLINEAR SYSTEM TOOLS

proprietary game development tools • hand-crafted • 2020 - 2023

NST is a self-published software on Steam including a complete suite of tools for interactive and nonlinear story editing. It has a custom scripting language aimed at designers and artists. It's split into libraries that can be integrated into external engines. In it, it has integration of  Steamworks,  Sentry,  Catch Tests, Chromium Renderer and much more.

TOPLISTA.MK

website about macedonian music • vibe-coded • 2025 - present

Toplista.mk is a website about Macedonian music, featuring charts, news, and artist information.

MKQR

open standard proposal (university collaboration) • hand-crafted • 2021

MKQR is a Macedonian open and independent standard proposal for encoding and data transmission for financial transactions. The types of

transactions include payment of utilities, payment of invoices, donations, etc. It contains the full implementation of the standard in C++, along with bindings for other languages. It was developed as part of a university project.

QLIB 🐙

fork of 🐓 qmk • hand-crafted • 2022

QLIB is a single-header library which contains common utility functions for custom keyboard firmwares. It's based on the QMK framework.

VARIOUS GAME PROTOTYPES 🌐🎮🎮

various projects from the past 10+ years • hand-crafted • 2013 - present

I've done a lot of weekend projects, Game Jams and such, in the past 10+ years.

INTERESTS

📖 Video Game Design

📖 Linear Algebra

📖 Computer Graphics

📖 Virtual Reality

📖 Augmented Reality

📖 High-Concept Video Games

📖 Interactive Narratives

📖 Audio Design

📖 Audio DSP

📖 Aviation

📖 Space Exploration

📖 History

LANGUAGES

🇬🇧 English - Excellent

🇲🇰 Macedonian - Native

🇷🇸 Serbian - Excellent

🇫🇷 French - Essentials