Peter Leontev

Unreal Engine Technologies & Visualization Platforms

Contacts

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Skills

Core: C++, Unreal Engine 4/5, Pixel Streaming, 3D Visualization, Geometry&Texture processing, Game Tools development, Systems design, Algorithms, Data Structures, Debugging, CPU/GPU framerate optimization, Multithreading techniques
Familiar: DCC tools (Houdini/Maya/Blender), C#, Python, SQL & NoSQL Databases, Math, Perforce, Git, SVN, Teamcity

Work experience

Founder, Interactive Technologies & Visualization Platforms Expert
Nov 2019 – Current
at PL Game Tools

I help startups to create Interactive Technologies & Visualization Platforms via Unreal Engine.
My clients & work:

1) Concurrents (US): https://www.concurrents.com/ (UE4 cloud streaming technology, GPEG)
Realtime asset streaming improvements, CPU/GPU optimizations (DirectX) to achieve stable frame rate, optimizing networking mulithreading (sockets), implementing timeslicing techniques to avoid GPU stalls and hitches, level streaming profiling and optimizations, virtual texturing R&D to stream texture data from the server, VCS automation.
(UE4, C++)

2) Spherical Studio (US): https://spherical.studio/ (3D framework for watershed visualization in Los Angeles)
Pixel Streaming pipeline set up and improvements (Google Cloud), asset delivery pipeline set up in Cesium context, multiview rendering, investigating and fixing pixel jittering issue, profiling and optimizations (UE4, C++, Cesium, Google Cloud)

3) Sber AR/VR Lab (Russia): https://www.unrealengine.com/marketplace/en-US/product/digital-avatar-service-link (Face Animation SDK for MetaHumans)
Automated solution for creating realistic face animations from audio files.
(UE4, C++)

4) Conundrum AI (Russia): https://conundrum.ai (industrial automation via AI)
Framework to simulate high-quality visual defects on shaving razors.
(UE4, C++, vertex shaders)

5) Evovor (Canada): https://www.evovor.com (cloth & fashion design platform)
Asset pipeline tools to accelerate in-house development (cooking & packaging assets, runtime

assets importers/exporters), hitch-free image loading at runtime.
(UE4, C++)

Senior Unreal Engine Programmer **Oct 2018 – Nov 2019**
at 1C Entertainment

King's Bounty 2. Results (Unreal Engine 4, C++, Python):
1) Tools development: road editor (texture atlases support, World Composition integration, no Houdini required), realtime blending system for dynamic lighting, FMOD preview support, landscape utilities in open world context
2) Engine modifications: landscape tools customization, blueprint snapping support (to speed up level design workflow), occlusion culling R&D
3) Codebase adaptation to YWYU ideology to improve development workflow and decrease compilation time (by 2-2.5x)
4) Frame rate optimization using built-in CPU/GPU profiling tools to fix Garbage Collection hitches, Async Loading time and Level Streaming bottlenecks
5) Build pipeline and CI support, batch processing of game content
6) Mentoring new members of the team to increase efficiency of onboarding process

Technical lead **Feb 2017 – Sep 2018**
at Screwdriver Entertainment

POSTWORLD is Hardcore Action RPG with non-linear story and possibility to replace character body parts on the fly (Steam, 2018). What I did (Unreal Engine 4, C++ & Blueprints):
1) Architecture development of gameplay systems (modular characters, modular weapons, inventory, etc.) and game flow
2) R&D of procedural terrain generation and procedural object placement to speed up level design
3) UMG UI logic (in-game interfaces)
4) Editor extensions and plugins to speed up level design workflow

Backend Python Developer **Dec 2015 – Jan 2017**
at Panoramik Inc.

My job responsibilities were:
1) Maintenance and support of mobile games backend: Forge of Gods and Mighty Party (Flask, Python, GAE, NoSQL + SQL Databases)
2) General improvements of the backend logic in terms of performance and scalability, with respect to time complexity, sync/async trade-off (memcache, taskqueues, cron)
3) Experimental migration from AppEngine to Appscale (open-source implementation of AppEngine) to significantly reduce the server costs (based on container-based virtualization techs)

Education

BSc, Applied Math, Tomsk Polytechnic University (2010 – 2014)
Professional development, Algorithmic Bionformatics, Saint-Petersburg Bioinformatics Institute (2014 – 2015)