Peter Leontev
UE4 Research, Development and Consulting

Contacts

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Skills

Core: C++, Unreal Engine 4, Game Tools development, Systems design, Algorithms, Data Structures, Debugging, CPU/GPU framerate optimization
Familiar: DCC tools (Houdini/Maya/Blender), C#, Python, SQL & NoSQL Databases, Math, Rendering algorithms, Perforce, Git, SVN, CI

Work experience

Founder, Game Tools & Tech R&D   **Jan 2020 – Current**
at Peter Leontev Game Tools

I help people around the world make great Game Tools & Technology. My most significant work:

1) Primal Space Systems (US): https://www.primalspacesystems.com (GPEG game streaming technology)
Realtime asset streaming game & render thread optimizations, level streaming optimizations to reduce hitches, render thread optimizations (DirectX) to achieve stable framerate, virtual texturing R&D to stream texture data from the server to the client, engine modifications to extend DirectX RHI layer
(UE4, C++)

2) Evovor (Canada): https://www.evovor.com (cloth & fashion design platform)
Game tools designed from scratch to increase efficiency of in-house pipeline (cooking & packaging assets, runtime assets importers/exporters), images loading at runtime with no hitches.
(UE4, C++)

3) SberDevices AR/VR Lab (Russia): https://visper.tech/developers (runtime sound & lipsync construction)
UE4 Plugin provides capability to construct sound & lipsync animation at runtime (no Editor required), which is helpful to make characters sound and also animate them. UE4 MetaHumans integration is available.
(UE4, C++)

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

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)