Peter Leontev

Generalist C++/Unreal Engine Programmer

Contacts

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Skills

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

Work experience

Generalist C++/Unreal Engine Programmer **Oct 2018 – Present**
at 1C Entertainment

King's Bounty 2. Work in progress (Unreal Engine 4, C++):
1) Tools development: road editor (texture atlases support, World Composition integration, no Houdini required), realtime blending system for dynamic lighting, FMOD editor preview support
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 times (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

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)

Algorithmic Researcher Intern **Jul 2015 – Aug 2015**
at Center For Algorithmic Biotechnology at SpbSU

My research project consisted of the following steps:
1) Find and annote 16S rRNA genes in SPAdes assembly graph (via barrnap and Infernal). In computer science terms the task was to find small substring in very large string represented as so called De Bruijn graph
2) Write new graph path finding procedure in SPAdes environment to extract useful information about 16S rRNA genes for their further annotation
3) Compare both approaches to find the best in terms of genome assembly quality metrics

C++ Software Developer Intern **Jul 2013 – Aug 2013**
at Unipro

While being an intern I:
1) Implemented a few modules to use bioinformatics software called UGENE through web-service called Galaxy (via C++ Qt). This way one can easily skip installation phase of UGENE and just use its functions through Galaxy
2) Wrote a plugin to run UGENE tools installed on remote server and get results back (using Java). Server was needed since those tools usually require huge database for particular analysis (bunch of human genomes take a lot of disk space)

Education

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