Leontev Peter

Generalist C++/Unreal Engine developer

Contacts

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Skills

Proficient: C++, Unreal Engine 4, Python, Algorithms, Data Structures, Math, CPU/GPU frame rate optimization, Game development, Systems design, SVN/Git, CI
Familiar: Rendering algorithms, C#, Qt, SQL & NoSQL Databases, DDC tools, JS (React), Linux, Perforce

Work experience

Generalist C++ Programmer **Oct 2018 – Present**
at 1C Online Games (1C Entertainment dep.)

Unannounced cross-platform RPG (PC, PS4, Xbox One). Work in progress (Unreal Engine 4, C++):
1) Tools development: semi-automatic road editor (World Composition, texture atlases support, no proprietary DDC tools required), blending system for dynamic lighting, Niagara proxy meshes builder
2) Engine modifications: landscape tools customization, blueprint snapping support (to speed up level design workflow)
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 GC, Async Loading 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)