

Peter Deltchev

aspiring systems & graphics programmer

Languages: C, C++, GLSL, Go, Python, Java, PHP, SQL, JavaScript
Technologies: Linux, OpenGL, PostgreSQL, MySQL, WebGL
Tools: Git, IntelliJ IDEA, CLion, CMake, OpenSSH

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Experience

Celestial Industries (team of five) Engine Programmer Jan. 2018 – current | UBC

Celestial Industries is a city building-themed 2.5D RTS. It is built on a custom engine using C++, OpenGL, and SDL.

- implemented the ability to pick a tile in the 3D world using the mouse cursor and a raycast approach
- built a shader-based particle system that smoothly renders over 2 million particles on a mid-range laptop
- made key contributions to game design, including the original concept and core gameplay mechanics

Xeros OS (team of two) Kernel & OS Programmer Sep. – Dec. 2017 | UBC

Wrote key components in C of a custom operating system and kernel based on Unix concepts.

- implemented key parts of a process scheduler including the dispatcher and sleep queue
- built a shell supporting several userspace commands like “ps” and “kill”
- wrote a keyboard driver and a general abstraction for device drivers based on interrupt service routines

Wish Infrastructure & Security Intern May – Aug. 2017 | San Francisco

Eliminated login-time dependency on an LDAP cluster when SSH’ing into servers. Created distributed public-key infrastructures with Go, Chef, SaltStack, Vault, and cfssl. Prepared extensive technical documentation.

- facilitated client certificate-based SSH authentication by writing client- and server-side tooling for it
- designed and deployed highly available PKI’s for TLS and OpenSSH certificates across multiple datacentres
- worked with Chef, SaltStack, OpenSSH, cfssl, Consul, and HashiCorp Vault to build out all of the above

NVIDIA Corporation Embedded Systems Software Intern May – Aug. 2016 | Redmond

Built an over-the-air update system, as part of NVIDIA’s automotive team, for a family of embedded platforms.

- architected and wrote the top-level framework and UI that tied together several separate modules
- created unit and integration tests with PyTest to ensure reliability of the system
- wrote thorough technical documentation for how to use and further develop the project
- added new, configurable functionality to a system image creator written in C

Poniverse Founder, Technical Director Oct. 2011 – current | Remote

Founded and led a nonprofit that operates online fan communities for >100,000 monthly users. Did everything: building out server infrastructure, developing new apps, leading cross-disciplinary teams, managing communities, public relations, attending conventions, legal/corporate processes, etc. Learned many technical and soft skills here.

SSH Configurator (team of two) Programmer, Writer Sep. – Dec. 2017 | UBC

Researched the current state of SSH access management at various organizations and built a tool to improve it for small businesses. Wrote up findings and design goals of the tool in the style of an academic paper.

Education

University of British Columbia

Bachelor of Science in Computer Science

Chancellor’s Scholar, Co-op

Sep. 2013 – Aug. 2018 – program completion

Nov. 2018 – expected graduation