# OLIVER SMITH

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## Profile

Extensive development experience coding with C++, C, Python, Go under Linux, Windows and cross-platform environments, with medium to large enterprise companies. Primary skill sets in the domains of back-end, server and networking systems; development, CI, and reliability tooling.

## Technologies

* Operating Systems: Linux, Windows, *Mac OS X;*
* Languages: C++, Python, GoLang, C, Bash, Powershell, HTML, Perl, JavaScript, Lua*;*
* Databases: MySQL, Reddis, past: PostgreSQL*, MSSQL, Oracle;*
* Other: GCC, Clang, GDB, CMake, TCP/IP, Flex/Bison, LibEvent, 0MQ; SQLAlchemy; Flask; VMWare ESXi/vCenter management/automation; Docker;

## Experience

* Design, development, and testing of small, medium, and large applications;
* MMO server feature and gameplay development and operation;
* Software testing and development automation;
* Software re-factoring for long-term stability and maintainability;

## Points of Note

* Creator of the “DAoC Player Wishlist” system circa 2002;
* Creator of the “WarBirds.org” site – a pioneering MMO community site;
* Creator of the automation that runs the .UK domain for Nominet.

## Professional History

Current position:

### Super Evil Mega Corp, CA. 2017-2018 (2 years), 2020-Present

Senior Software Engineer, Engine & Tools Team

* C++ and Python maven,
* Primary on PC/Mac Vainglory alpha, making codebase support C++14,
* Developed "launcher" app to launch locally build code/assets for designers etc,
* Feature/optimization/refactoring: DSL, asset tools/pipelines,
* Hardware consolidation using VMware VCenter,
* Jenkins CI overhaul to simplify and support additional platforms,
* Perforce-SVN migration: Developing tools to verify and augment P4 tools of 1.4TB repos,

### SpaceX, CA. 2019-2020 (2 years)

Senior Software Engineer, Software Delivery Engineering

* Streamlined NASA Requirements compliance reporting processes from days to hours, facilitating approval of Demo-1 crewed launch,
* Assisted with company-wide Python2 -> Python3 package migration,
* Worked on/supported SpaceX’s internal software and testing CI systems,
* Identified and resolved systemic issues with Postgres databases and CI integration,
* Identified and fixed low-level issues in vehicle telemetry and ci-scheduling systems,

### Facebook, CA. 2014 - 2016

Production Engineer, Facebook, Feed PE

* Day-to-day production operations of Facebook newsfeed,
* Worked closely with numerous teams and microservice stake holders,
* Automated kernel upgrades for feed's fleet of machines and microservices,
* Developed various tools to surface deep diagnostics from crashes,
* Responsible for numerous monitoring and remediation automatons,
* Various developer and service efficiency projects,
* Implemented transition/migration systems to support growth/scaling,

### Blizzard Entertainment, Irvine, CA. 2012 - 2014

Senior Software Engineer, Server: World of Warcraft

* Investigating and resolving live crashes in World of Warcraft servers;
* Providing technical feedback to designers/gameplay on upcoming features;
* Identifying and reporting performance bottlenecks in server systems;
* Implementing and refining performance instrumentation;
* Micro-optimization of high-use subsystems.

### PlayNet Inc, Bedford, Texas. 2003 - 2012

Server/Systems for WWII Online and Rapid Assault

Key responsibilities:

* Game-server and all server-related system development in C and C++;
* Technical input to design and production;
* Operational and Production support systems:
	+ Release management;
	+ Patching systems;
	+ Anti-cheat systems;
	+ GM and CM in-game systems and out-game management tools;
	+ Game management tools and services.

Main accomplishments:

* Implemented all server-side gameplay, features, functionality, and fixes from 2003;
* Database persistence systems;
* Migrated key technologies from 1999 C designs to contemporary C++ modules;
* Reduced proprietary codebase from 1,500,000+ lines of code to ~600,000;
* Reduced network CPU overhead by 2/3rds and bandwidth bv 1/3rd;
* Server technologies to support various military contract uses of the project;
* Introduced producers to feature prototyping;
* Designed numerous gameplay systems;
* Implemented a Lua scripting environment and relevant glue libraries;
* Developed gameplay automation systems for aspects of historical event playouts;
* Designed and developed server and client anti-cheat systems;
* Uptime of server processes from hours to weeks/months.
* Optimized Windows release build times from 10 minutes to 40 seconds;
* Reduced host build times from 12 minutes to 49 seconds;

### Guardian Unlimited, London, England. May - 2002

Contract Designer/Developer

Built/implemented tools to avoid scaling issues for The Guardian Online; developed the basis for their e-commerce and micro-transaction system.

### Redbus Design, London, England. 2001 - 2001

Contract Designer/Developer

Designed and developed Marketing Lead and Targeting system with PHP under Apache.

### Granada Media, London, England. 2000 - 2001

Contract Developer, Test Team Tools Leader and Support

Contracted to develop a portal for Granada's new Set-Top-Box but role rapidly expanded:

* Development and lead test for PowerChannel projects,
* Bringing Roxen Platform Content Management System into use,
* Support of Granada Media web services, including “Pop Idol” voting engine

### Demon Internet, London, England and Amsterdam, Netherlands. 1993 - 2000

Demon Internet was one of the UK's first dial-up access Internet Service Providers started by a bespoke programming company.

#### Software Engineer (July 1993-1994)

Developed and maintained sophisticated bespoke business packages, quickly became primary contact for major contracts. Also became primary support/developer for Amiga users and the AmiTCP TCP/IP stack.

#### Corporate Services (1994-1995)

Worked as a team member/lead while developing systems, tools and automation to run and operate the service, the sales and support teams.

* + Developed internal/customer-facing systems for sales, support and products;
	+ Acquired expert skills in Perl, BSD/Unix systems, networking, administration, etc;
	+ Developed a small department into a multimillion pound division of the company;
	+ Built positive presence for the company in the corporate sector despite growing competition.

#### Hostmaster/Senior Hostmaster (Amsterdam, The Netherlands, 1996-1997)Hostmaster/Senior Hostmaster (London, England, 1995-1996)

* + Took a leading role in domain registration and UK-internet peering areas,
	+ Created automation which ran the CO.UK and ORG.UK until Nominet was created;
	+ Played a leading role in the creation of Nominet for operating the “.UK” domain;
	+ Leading role in developing industry automation/procedures with InterNIC and RIPE;
	+ Active involvement in startup of Demon's Netherlands branch;

#### Systems Designer/Programmer (June 1997-May 2000)

* + Company wide stability, reliability, automation and core-system development
	+ Creation of single-process web server to host 65,000 virtual hosts on a 386;
	+ Internal-support for 3rd party sourced open-source systems;
	+ Y2K Compliance Testing (and correction) of MMDF;
	+ Design and implementation of modular E-Commerce system.

### Additional Experience

ADDITIONAL EXPERIENCE

Arctic Breeze, Grimsby, England. Developer/System Administrator 1991-1993

Promax Ltd, England. Embedded (on-site) Software Developer 1988-1991