

Summary

I am a self-driven and motivated developer with interests in many areas of programming. I have worked in system architecture; web and compiler development; graphics, network, concurrency, and tools programming; and build systems. My philosophy is to develop flexible code rapidly by iteration. I never stop learning new ways to solve problems.

Technical Proficiencies

Languages: Proficient: **ANSI C**, **C++03** (some C++11), **Java**, **PHP**, **JavaScript**, Lua,
Prior Experience: **SQL**, CSS, HTML, XML, **JSON**, Python, Batch scripting,
Bash scripting, Java Bytecode

Libraries: Proficient with the Java 6 **Collections** Framework, AWT, Swing,
Lightweight Java Gaming Library (LWJGL), OpenGL 1.1, 2.0, 3.2 Core,
GLSL 1.1, 2.0 (including GLSL scripting), DirectX 10 (including HLSL),
Java Database Connection (JDBC), **Java IO & Non-blocking IO** (NIO),
Android application development, Simple DirectMedia Layer 1.2, 1.3, and 2.0 (SDL),
Standard Template Library, Apache MINA, LuaBridge, AntTweak Bar

Technologies: Microsoft Visual Studio 2005 Express and 2010, 2012, Eclipse IDE, Netbeans IDE,
MySQL, **Premake** 4.3 and 4.4, **Apache ANT**, Autotools, and GNU Makefiles

Professional Experience

Google Software Engineering Intern May 2014—Present

Google Summer of Code 2013 SDL Meta-Build System June 2013—September 2013

- Created a unified cross-platform meta-build system for Simple DirectMedia Layer using Premake
- Contributed to both Simple DirectMedia Layer and Premake open source projects
- Blog detailing work: <http://gsocben.blogspot.com/>

enové Website Developer October 2011—July 2012

- Protected digital image content by implementing a session-based security system
- Provided ability to track digital images if stolen by using steganography to embed hidden copyrights
- Sped up image loading times by automatically generating thumbnail images in conjunction with larger images
- Implemented a cross-browser, continuous image slideshow which shifts large images right to left with looping

Lakeland College Programmer January 2012—May 2012

- Collected information, URLs, and pages to be displayed on a mobile application
- Converted course information to Blackboard-compatible formats by writing a Java tool to automate the process
- Worked as a primary liaison between Blackboard, Inc. programmers and Lakeland College

Projects

From Where She Dreams DigiPen Student Project May 2013—Present

- 2D narrative experience game written from scratch in C++ and Lua
- Team project with 3 other programmers, 3 artists, 2 sound designers, and 1 game designer
- Roles include: Engine Architect, Graphics Programmer, and Technical Director

Djinn And I DigiPen Student Project January 2013—April 2013

- 2D pet-raising menu-based simulation game written from scratch in C using an OpenGL wrapper
- Team project with 4 programmers (my roles: Technical Director, Engine Architect, and Menu Programming)

Thornefall Independent Project July 2012—Present

- 3D multi-player online fantasy RPG written from scratch in Java, C++, and Javascript
- Team project with 1 other individual who works on art and sound assets
- My roles include: Engine, Tool, and Server Architect; Gameplay, GUI, Graphics, and Network Programming; Technical Director; and Producer

Education

DigiPen Institute of Technology Redmond, WA

- B.S., Computer Science in Real-Time Interactive Simulation; 2012-2015 (expected)
- M.S., Computer Science 4+1 Program; 2015-2016 (expected)