

# Aaron Bolyard

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**portfolio:** <http://portfolio.commaexcess.com>

**github:** <http://github.com/aaronbolyard>

## objective

I'm a programmer who loves to solve the difficult problems faced when engineering interactive software with real-time demands.

## projects

**2014 Algae.Canvas**, a resolution-independent vector graphics library in C#, capable of rendering entire scenes with little overhead. Makes use of multi-core processors by splitting geometry generation up on multiple threads and modern graphics API features to reduce draw calls to a minimum. During development, I had to find solutions for such problems as resource contention, task scheduling, sorting and batching, and geometry generation.

**2015 Hologine**, a solid attempt at a high-performance game library in C++. Have developed specialized and efficient allocators to permit cache-friendly and blazing fast memory management strategies; inter-thread communication and task pooling; and unit tests to ensure proper behavior of features throughout development.

**2012 Eight Seasons**, a game framed around an interactive, epic poem. Features real-time vector graphics in a game with lax hardware requirements. Demonstrates a complete, working game example, from splash to menus to gameplay. A majority of the game is developed in Lua; performance critical aspects and platform-interop written in C.

## skills

**languages** C, C++, C#, Lua, JavaScript

**libraries** Standard libraries (C/C++/C#),

**tools** Visual Studio, GCC, Git,

Boost, OpenGL, DirectX,

Premake

Windows API

## education

**2010:** Graduated from high school.