David Erbelding   *daviderbelding@gmail.com*
GitHub: *github.com/Erbelding*   *(585) 410-0923*
Portfolio: *erbelding.github.io*

Skills:
Languages: C++, C#, Java, Lua, HTML5, CSS, Javascript
API/Tools: OpenGL, Direct3D, Unity, MonoGame, Visual Studio, Eclipse, Excel, Windows, Unix/Linux, Git
Technical: Debugging, FOSS Development, Design Patterns, Data Structures, Algorithms, Scripting, Working Knowledge of most Modern Rendering Techniques
Misc: Linear Algebra, Game Design and Balance, UI/UX Design, Prototyping, Playtesting, Experience working in small teams, and on tight schedules.

Projects:
Hatchit, Engine (C++ Vulkan): Lead Engineer
- Designed graphics API for configurable pipelines using Vulkan
- Wrote and tested JSON file specifications for platform agnostic graphics resources
- Created systems to efficiently load resources and track asset dependencies
- Used SSE2 to write an accelerated math library

Mineshaft Mayhem, Game (C++ DX11): Gameplay/Graphics Programmer
- Wrote scene and object loading code to import assets from XML files
- Integrated Lua scripting into the engine for game logic
- Wrote shaders for mind bending visual effects with a deferred shading model
- Added gamepad support with SDL2

Soul Bound, Game (Unity): Lead Programmer
- Organized and supported other programming team members
- Implemented and tuned character movement and camera controls
- Wrote basic editor tools used by level designers
- Implemented dynamic Fog-of-War effect in levels with customized shader code
- Designed and balanced core combat systems and AI
- Created Lua scripting API for for dialog, quests, and spells
- Created persistent saves to track quests and player progress

Cheating Death, Board Game (Hobby Project): Designer
- Created the core mechanics and feel of the game
- Designed and organized cards into spreadsheets to be easily printed
- Ran playtests and collected data to improve experience and clarity of rules

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Education:
Rochester Institute of Technology	Dec 2016
Game Design and Development BS	3.86 GPA

Employment History:
Research Assistant (Atlas)   Aug 2016 – Dec 2016
Wrote C++ and Graphics code demo/tutorials
Developed front-end for website to display tutorial info
Teaching Assistant (Level Design & 2D Animation)   Sept 2015 – May 2016
Helped students with lab computers/software
Critiqued and Graded homework assignments and projects