Tims Gardner

Games, Graphics, Visualization, Design

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Education

2004–2005	*Corcoran School of Art*, Washington, DC.
2002–2007	**BA**, *Reed College*, Portland, Oregon.
2008–2010	**MPS**, *ITP at Tisch School of the Arts, NYU*, New York, New York.

Relevant Work Experience

2011 Guggenheim-BMW Urbanology, *Local Projects*, New York.
- Award-winning large-scale outdoor installation and immersive game involving coordinated iPads, projectors, and eighteen plasma-screens.

2011 3D Imaging & Modeling, *Department of Objects*, New York.
- Scanning and special effects with Kinect, Cinder, and Houdini.

2012 UI, UX Design & Implementation, *Limina Studios*, New York.
- Designed, prototyped and implemented user interface for cruise ship Android device.

2012–2013 Malware Visualization & Frontend Development, *Threatgrid*, New York.
- Designed and implemented user interface for enterprise malware analysis webapp in Clojure and ClojureScript.
- Extensive use of core.logic relational logic library.

2013– Independent Research & Freelancing, *Kitchen Table Coders*, New York.
- Self-directed research and development focussing on programming language theory and visualization at creative coding and language-design hub.
- Ongoing projects include a full port of Clojure to the Unity 3D game engine.

Selected Independent Projects

2009 Graphic FOL Calculus.
- Proposal for recursive visual calculus for first-order logic.

2010 Hornbeam.
- Interactive three-dimensional visualization of tableau proofs.

2010 Set Theory Visualization.
- Visualization of each formula in chapter one of Patrick Stuppes' *Axiomatic Set Theory*.

2014– Arcadia.
- Full port of the Clojure compiler and language to Unity3D.
- Bidirectional data mapping between Clojure persistent data and Unity API.
- Demonstrated applicability for prototyping; virtual reality; and production-ready game code.

2014 **Mathematica Program Analysis**.
- Mathematica package for generating and analyzing computable call and reference graphs for source code, applicable to many languages.

2015 **Cloze**.
- Fully generic symbolic templating and rewrite system.
- Demonstrated applicability to HTML/CSS generation and bulk metaprogramming.

Languages

C#	*Focus on Unity and the Clojure-CLR compiler.*
Clojure	*Four years extensive experience.*
ClojureScript	*Over a year full-time experience developing major webapp.* *Bridge to OSX/iOS native OpenGL.*
HTML, CSS, LESS	*Extensive experience with eg Hiccup, Twitter Bootstrap.*
Java	*Six years experience, focus on interactive visualization.*
JavaScript	*Experience with Node, ClojureScript on Node.*
LaTeX	*Wrote Clojure/Elisp literate programming* *Org-mode extension for LaTeX.*
Mathematica	*Focus on graph computation, program analysis, visualization.*
Python	

Frameworks, DSLs, Major Libraries

Games	Unity.
Graphics	D3, Ejecta, Gamma, GLSL, HTML5 Canvas, OpenGL, Pex, Plask, Processing, ShaderLab.
Logic/Query	core.logic, core.match, Datascript, Datomic, MiniKanren.
Mobile	Android, Ejecta, Unity.
VCS	Git.
Web	Garden, Hiccup, JQuery, Ring.
Miscellaneous	Instaparse, Mathematica ClojureBridge.

Other Skills

Adobe Suite	After Effects, Illustrator, InDesign, Photoshop.
Drawing, Storyboarding	Acrylics, Etching, Illustrator, Manga Studio Pro, Nib Pen, Oils, Photoshop.
Editors	Aptana Studio, Eclipse, Emacs, IntelliJ, LightTable, Sublime, Xamarin Studio.