TIMOTHY G. WONG

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OBJECTIVE: To obtain a full-time position as a software developer at a gaming company.

EDUCATION: **Stanford University, Stanford, CA (2012)**
BS & MS in Computer Science with a minor in Music, Science, & Technology
Cumulative GPA: 3.925

SKILLS: **Programming Languages**: C, C++, C#, Lua, PHP, Python, Haxe, AS3, HTML/CSS/jQuery
Tools and Frameworks: Unity3D, Git, Perforce, Phabricator, SDL, OpenGL, MySQL

EXPERIENCE: **FUNOMENA INC – Software Engineer** (2016-Present)
- Integrated NodeCanvas visual editor for scenario FSMs and AI behavior trees. Implemented all NodeCanvas actions and nodes used in the game. Designed systems for dynamically switching between AI behavior trees and reacting to impulses.
- Redesigned character selection algorithm using a Delaunay triangulation approach.
- Designed and implemented dynamic music system via integration with Wwise framework.
- Set up Phabricator server from scratch and integrated scripts to perforce with Phabricator.
- Implemented generic system for tracking and resolving prioritized character state changes.

MACHINE ZONE – Lead Software Engineer – Games/Engine Teams (2014-2016)
- Drove rollout of Phabricator code review tool for entire game team organization to replace old, clunky tool and provide better code iteration.

(*Unreleased Title)*
- Designed and implemented system for applying arbitrary effects to world map, used by multiple other features. Implemented lazy "catchup" logic for fault tolerance/recovery.
- Designed and implemented unit flocking/obstacle avoidance AI system.
- Optimized combat logic latency via detailed profiling and performance analysis.
- Fixed and maintained system for dynamically reloading UI markup without recompilation.

QUARK GAMES – Lead Game Developer (2012-2014)
- Wrote, established and enforced company coding standards.
- Architected core client and platform library, used across two different games.
- Trained multiple junior engineers and established new technical design document process.

Sky Vikings (2014)
- Rewrote rendering, pathfinding, and AI systems to solve performance issues.

Champs: Battlegrounds (2013)
- Optimized client rendering code and performed detailed performance analysis.
- Designed modular FSM-based tutorial system to allow rapid iteration by game designers.

GOOGLE INC - Software Engineer Intern (Summer 2011)
- Implemented "I'm Feeling Lucky" button in the YouTube Video Editor (patented).

PLAYMESH - Solo Project Lead (Summer 2010)
Gem Attack (2010)
- Wrote all game logic and client code. Handled game design, gameplay balance, performance optimization, and integration with online multiplayer framework.

INDEPENDENT GAMES:

Ripple Runner – Rhythm-based platforming game with retro graphics
Code and assets created from scratch in 48 hours for Ludum Dare 29 (solo division)
2nd place overall out of 1,492 entries
http://ludumdare.com/compo/ludum-dare-29/?action=preview&uid=7285

Match Girl – 2D puzzle platformer with dynamic lighting system
Code and assets created from scratch in 72 hours for Ludum Dare 28 (team division)
2nd place overall out of 780 entries
http://ludumdare.com/compo/ludum-dare-28/?action=preview&uid=7285

Hyper Furball – Zany side-scrolling RPG about a cute cat
Code and assets created from scratch in 72 hours for Ludum Dare 27 (team division)
4th place overall out of 776 entries
http://ludumdare.com/compo/ludum-dare-27/?action=preview&uid=7285

Melody Muncher – Chiptune rhythm game
Code and assets created from scratch in 48 hours for Ludum Dare 33 (solo division)
6**th place overall out of 1199 entries**
http://ludumdare.com/compo/ludum-dare-33/?action=preview&uid=7285

Labyrinth – 2D puzzle platformer with level rearrangement mechanic
Code and assets created from scratch in 48 hours for Ludum Dare 31 (solo division)
7th place overall out of 1,364 entries
http://ludumdare.com/compo/ludum-dare-31/?action=preview&uid=7285

Nyamo's Adventure – Metroidvania platformer about a shapeshifting blob
Code and assets created from scratch in 72 hours for Ludum Dare 35 (team division)
8**th place overall out of 1,594 entries**
http://ludumdare.com/compo/ludum-dare-35/?action=preview&uid=7285

Syncopation – 3D music game with unique mechanics and procedurally-generated visuals
Created using C++, OpenGL, and SDL for Stanford's Interactive Computer Graphics course
Features MIDI processing, latency-aware audio engine, procedurally-generated music-based terrain, music-reactive particle effects, and physically-modelled blob shapes.
Winner of the Best Game Award in the 2012 Stanford Computer Game Competition
http://www.youtube.com/watch?v=gV-Ytcucyi4

Rain – Emotive, atmospheric experience inspired by *Journey*
An interactive piece that presents a world to explore and discover with no score, time limits, or enemies.
http://ddrkirby.com/games/rain/rain.html

Pet Furball – Cute virtual pet for mobile devices
A cute virtual pet that you can interact with in various ways. Available for iOS, Android, and Web.
http://ddrkirby.com/games/pet-furball/pet-furball.html

ADDITIONAL INFORMATION:

- I produce chiptune music independently and compose all of my own soundtracks. My music is available at http://ddrkirbyisq.bandcamp.com.
- I also fulfill soundtrack commissions for other games, such as *Mysterious Space (2015):* http://store.steampowered.com/app/368700/
- My other interests include Magic: the Gathering drafts and various computer games.