ANTHONY ZHANG

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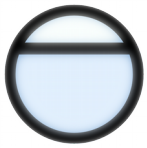

RELEVANT SKILLS

programming

(see PROJECTS & EXPERIENCE)

Python	4 years	C++	8 months	Git/SVN	PyQt	Arduino
Lua	3 years	MATLAB	6 months	Flask	NumPy	LÖVE 2D
HTML/CSS/JS	4 years	Scheme	4 months	WPF/WinRT	SQL	ASM
C (embedded)	3 years	Java	2 months	CherryPy	LaTeX	BPy/BGE
C#	1 year	AHK	5 years	jQuery	Bash	GLSL

software construction

- Open source development – 38+ published projects over 5 years.
- Proficient using Git DVCS (including Gitflow) and SVN in POSIX/Windows environments.
- Familiar with test-driven methodologies and agile development.
- Experienced at object oriented, declarative, and functional paradigms.

design

- 4 years experience with Blender3D in interactive 3D media.
- 3 years experience with GIMP, Krita and Photoshop for digital art.
- 6 months experience with AutoCAD, SolidEdge, and DesignWorks Mechanical.

miscellaneous

- Competent at electronic circuit design/construction and EDA/ECAD tools.
- Experience typesetting technical documents with LaTeX – 2 years.
- Bachelor of Computer Science candidate; digital hardware option (University of Waterloo).
- Recipient of Governor General Academic Medal.
- Familiar with MATLAB and Maple mathematics software.

PROJECTS & EXPERIENCE

See github.com/Uberi for project details and releases.

Windows Platform Developer Enflick, Inc.

Created Windows version of flagship product using WPF/C# – from the ground up – in two months. Added calling functionality to TextNow on Windows Phone (MVVM plus custom ORM), plus many improvements to the messaging experience and the in-app store. Managed release lifecycles of the Windows platform apps.

Research Assistant Ryerson University

Modelled and simulated different biosensor configurations in order to maximize efficiency. Created software to work with high-dimensional parametric sweep data with COMSOL and MATLAB. Created software used to run simulations on computing clusters such as SHARCNET.

Motion Tracking git.io/JZwtLg

Wrote, documented, and maintained Blender3D add-on for point reconstruction through motion tracking points in 2D from multiple viewpoints, using raycasting and optimized best-fit algorithms. Used in private film production for VFX.

Courserator 3000 courserator.anthony-zhang.me

Created automated course schedule creator for the University of Waterloo using SAT/DPLL constraint solver and the uWaterloo Open Data API. Made public-facing website with Python/Flask and jQuery. Heavy usage among uWaterloo students.

Achromatic git.io/hCinkg

Built a minimal, fast-paced 2D platformer built on top of ProgressEngine, a custom game engine. Playground for gameplay experiments such as nonlinear time and non-visual feedback.

MT-WorldEdit git.io/6hFJ6A

Actively maintained, documented, and lead development of popular voxel manipulation program for Minetest, adding a rich set of tools and comprehensive documentation.

Goosenstein: Nesting Season git.io/o7mqYg

In a team of 4, created an action-packed sidescroller game over the course of 24 hours using Lua and the LÖVE game engine. One of the 4 winning entries of HackWATERLOO 2014! Maintained and publicly released game after competition.

Other Applications

Authored and published applications such as MeseconEdit (circuitry simulator), Autocomplete (smart text completion), Solun, Autonomy (SmallTalk-style prototypal OO programming language), Budget-O-Matic, and Yunit.

Other Contributions

Maintainer and contributor to Mesecons and Pipeworks, author of The Mesecon Laboratory, Yunit (testing framework). Participated in Google Code-in, several SE Hack Days, BattleHack, Google Games 2014 (second place winner) , HackWATERLOO (award winner), Hack the North, and various others.

Other Libraries

Authored/published libraries such as Speech Recognition (the only Python GSR client), Pathfinder (grid A*), Bayesian Classifier, Spelling Corrector, Parallelist (multiprocessing library), Geolocation (wifi-based online geolocation), ProgressEngine (2D game engine), and Canvas-AHK (2D raster graphics library).