résumé – september 2015

ANTHONY ZHANG

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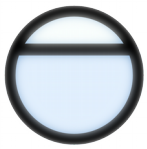

programming

Python	4 years	C++	1 year	Git/SVN/Hg	Pandas	PyGame
Javascript	4 years	Java	8 months	Flask	NumPy	LÖVE 2D
Lua	3 years	MATLAB	6 months	WPF/WinRT	Spark	VHDL
C	3 years	Clojure	4 months	SQL	SciPy	BPy/BGE
C#	1 year	AHK	6 years	Bash	LaTeX	GLSL

software construction

- Open source development – 60+ published projects over 6 years.
- Proficient using Git DVCS (including Gitflow) and SVN in POSIX/Windows environments.
- Experienced with object oriented, declarative, and functional paradigms.

design

- 4 years experience with Blender3D in games, robotics, visualizations, and 3D media.
- 3 years experience with GIMP, Krita and Photoshop for digital art.
- 1 year experience with AutoCAD and SolidEdge for rapid prototyping.

miscellaneous

- Competent at electronic circuit design and EDA/ECAD tools.
- Experience typesetting technical documents with LaTeX – 3 years.
- Bachelor of Computer Science candidate; digital hardware option (University of Waterloo).
- Familiar with MATLAB, Octave, and SymPy mathematics software.

Performance Engineering Intern at Mozilla Corp.

Designed and rebuilt Telemetry web frontend. Wrote the Mozilla Telemetry libraries. Performed analyses on large Telemetry datasets using Python on Apache Spark. Added many usability and process improvements to data aggregation. Presented tech talk on some of my work: Zen and the Art of Telemetry.

Windows Platform Developer at 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 at Ryerson University

Simulated various biosensor configurations to maximize sensor efficiency. Created software for processing high-dimensional data with COMSOL/MATLAB. Results appeared in Understanding the Role of Nanomaterials in DNA Biosensors Through Finite Element Analysis, presented at the COMSOL Boston 2013 conference.

Motion Tracking git.io/JZwtLg

Wrote, documented, and maintained Blender3D add-on for 3D point reconstruction from multiple 2D viewpoints, using raycasting and optimized best-fit algorithms. Worked closely with artists to improve software workflows. Used in multiple private film productions for VFX purposes.

Speech Recognition git.io/vZaHh

Authored and lead development of an open source Python speech recognition library with 60k+ users. Managed release lifecycle over 22 versions. Wrote comprehensive technical documentation and supporting literature.

Coursera 3000 coursera.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 non-linear time and non-visual feedback.

MT-WorldEdit git.io/6hFJ6A

Actively maintained, documented, and lead development of a 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 LÖVE. One of the 4 winning entries of HackWATERLOO 2014!

Other Contributions

Technical editor for Lua Game Development Cookbook. Contributor to various Mozilla projects, such as Metricsgraphics and Telemetry Dashboards. Author of The Mesecon Laboratory.

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