A N T H O N Y   Z H A N G

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programming						
Python	5 years	Flask	Ansible	Clojure	VHDL	SymPy
Javascript	5 years	Django	Vagrant	Scala	GLSL	SpaCy
Lua	4 years	SQL	Docker	Spark	ARM	MATLAB
C (embedded)	4 years	AWS	Bash	Pandas	C#/WPF	Git/Hg
C++	2 years	LaTeX	SWIG	NumPy	Java	BPy/BGE

software construction
· 60+ published open source projects over 6 years.
· Git DVCS (including Gitflow) and Mercurial in POSIX/Windows environments.
· Experienced with object oriented, declarative, and functional paradigms.

design
· 6 years experience with Blender3D in games, robotics, visualization, and 3D media.
· 4 years experience with GIMP, Krita and Photoshop for digital art.
· 2 years experience with AutoCAD and SolidEdge for rapid prototyping/modelling.

miscellaneous
· Competent at electronic design with EDA/ECAD tools such as SPICE and KiCAD.
· Skilled at typesetting technical documents with LaTeX – 3 years experience.
· Bachelor of Computer Science candidate; digital hardware option (University of Waterloo).

Data Engineering at Mozilla Corp.

Wrote provisioning service for performing custom data analyses with Apache Spark. Many truly marvelous things related to the data pipeline – crash aggregation services, developer accessibility, etc. – that this margin is too narrow to contain. Added various hang reporting features and related developer tooling for Firefox.

Performance Engineering at Mozilla Corp.

Designed and rebuilt Telemetry web frontend. Wrote Mozilla Telemetry Javascript libraries. Performed analyses on Telemetry datasets using Python with Apache Spark. Added many usability and process improvements to data aggregation. See my presentation for a sampler: 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.

Speech Recognition git.io/vZaHh

Authored and lead development of robust, easy-to-use library for performing speech recognition with 150k+ users. Managed product lifecycle over 33 releases with strong forward/backward compatibility guarantees, with heavy emphasis on portability, reproducibility, and ease-of-use.

Motion Tracking git.io/JZwtLg

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

Botty-Bot-Bot-Bot git.io/vwEmD

Created robust, extensible bot for Slack, including powerful developer tools such as the admin REPL and chat simulation. Creator-overthrowing functionality included out of the box.

Courserator 3000 courserator.anthony-zhang.me

Created automated course scheduling website for the University of Waterloo using a SAT/DPLL constraint solver and uWaterloo Open Data APIs. Heavy usage among uWaterloo students.

Other Projects

I write about some of my non-software projects on a personal blog and various other places, such as The Mesecon Laboratory. I also occasionally take notes.

Other Contributions

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