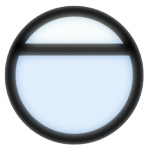
ANTHONY ZHANG

anthony.zhang@uwaterloo.ca ✲ (226) 600-4998 ✲ anthony-zhang.me



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.
- Bachelor of Computer Science candidate; digital hardware option (University of Waterloo).

Data Engineering at Mozilla Corp.

Created cluster provisioning/management service for authoring custom data analyses with Apache Spark. Extended performance reporting functionality in Firefox and multiple stability-related developer tools. Wrote aggregation services and derived datasets used as a basis for Electrolysis and stability project metrics.

Performance Engineering at Mozilla Corp.

Designed and rebuilt Telemetry web frontend. Created and published the Mozilla Telemetry Javascript libraries. Authored analyses over Telemetry datasets using Python and Spark. Added many new process improvements to data aggregation. See my presentation, Zen and the Art of Telemetry, for a sampler.

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 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, including multiple commercial products. Managed product lifecycle over 35 releases with emphasis on strong forward/backward compatibility guarantees, comprehensive documentation, and portability.

Motion Tracking git.io/JZwtLg

Wrote and maintained Blender3D add-on for 3D point reconstruction from multiple 2D viewpoints, using raycasting and combinatorial optimization methods. Worked closely with artists to improve asset pipeline workflows and motion capture integration. Used for VFX in multiple private film productions.

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. Designed resilient architecture contributing to 6+ months of maintenance-free uptime despite changes in underlying APIs.

Coursera 3000 coursera.anthony-zhang.me

Created automated scheduling website for courses at the University of Waterloo, using SAT/DPLL constraint solvers and uWaterloo Open Data APIs to help students obtain the best possible timetable. Heavy usage among uWaterloo students.

Other Projects anthony-zhang.me/blog

Created several different projects for a personal blog related to math, electronics, and software construction/design. Various other long-form writings, such as The Mesecon Laboratory.

Other Contributions

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

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