

## Experience

*Freelance Software Developer*  
{Missoula, Montana}

May 2012 - Present

- \* Developed biological models in Matlab.
- \* Developed an application for scraping image data from Imgur.
- \* Updated and developed web applications.
- \* Performed data analysis on personal financial systems.
- \* Developed applications to test security of personal network.
- \* Developed an application for adjusting hash values of a given file.
- \* Developed an application for beautifying filenames in an entire folder.
- \* Developed an application for organizing singleton files.

*Senior Software Developer* for **Hanna-James Enterprises, LLC.** July 2014-February 2015  
{Missoula, Montana}

- \* Wrote Terminal-Based Test Automation Software in Python
- \* Wrote specification document for GUI-Based Test Automation Software in Python
- \* Wrote proof-of-concept prototype for D3-based ToR Network Tracking software in Coffeescript
- \* Wrote specification document for GUI-Based SDK Architecture
- \* Designed and wrote entire MySQL database for SDK toolkit and implemented a data abstraction layer in Python with distinct connectors for loading the GUI, expanding a specified tool, building a tool for insertion into the database, and setting up the toolchain for execution.

*Teacher's Assistant* for **Programming Languages** Spring 2012  
*Teacher's Assistant* for **Computer Ethics** Fall 2011  
*Instructor* for **Computer Modeling** Fall 2010 - Spring 2011  
{University of Montana-Missoula}

- \* Taught freshman and sophomore students advanced features of Microsoft Excel and Access and assisted them during labs.
- \* Graded all assignments, papers, and exams. Also, maintained office hours to be available out of class for individual tutoring and fielding questions from students.

## Education

**University of Montana-Missoula**  
*M.S. Computer Science*

May 2014

Emphasis in Machine Learning, Data-Mining, and Simulations

**University of Montana-Missoula**  
*B.A. Psychology, minor in Math, Media Arts*

May 2010

## Technical

**Languages (Proficient):** L<sup>A</sup>T<sub>E</sub>X, Python, C#, Matlab, JavaScript, R, Java

**Languages (Familiar):** Bash, C/C++, Coffeescript, OCaml, Perl, Ruby

**Databases:** MySQL, SQL Server, Access

**Frameworks:** AngularJS, Ajax, ASP.NET, Bootstrap, D3, jQuery, Node.js, ØMQ

**Tools:** Android SDK, Emacs, GIT, Mercurial, VIM, Visual Studio

**Networking:** Aircrack-ng, Kali Linux, Metasploit Framework, NMAP, Wireshark/tshark

**Operating Systems:** Debian and Red Hat-based Linux, Mac OSX, Windows

**Techniques:** Iterative Design, User-Centered Design, Rapid Application Development

## Selected Projects

More information for the following and other projects can be found on my graduate portfolio blairgemmer.com and the source code is on GitHub @blairg23

**Bak-Tang-Wiesenfeld Model for Displaying Self-Organized Criticality**

Otherwise known as the Abelian Sandpile Model, written in Python using the Matplotlib module.

**Earthquakes**

A Python script to plot earthquakes that have occurred in the world, using the Matplotlib Basemap module.

**Hoot, aka The Wolf Box**

A hardware/software solution for broadcasting and recording sounds in adverse climates.

**Particle Simulator**

A particle physics simulator written in Python using the OpenGL libraries.