

Blair Gemmer {blairgemmer.com – blair.gemmer@gmail.com – 406.253.4962}

Experience

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Freelance Software Engineer
{Missoula, Montana}

May 2009 - Present

- * Working on FOSS projects.
- * Building bots for Slack and Discord.
- * Developing and maintaining web applications for local, domestic, and international clients.

CTO TOMIS, LLC.
{Missoula, Montana}

September 2016 - July 2019

Technical Lead:

- Owning the product design from the executive vision stage to the technical implementation.
- Driving design and development of technical specifications.
- Creating realistic expectations and strategies to accomplish short and long-term goals.
- Research and development on the latest technology.
- Building prototypes and proof-of-concept on new technology.
- Leading back-end team in design, development, and quality assurance of REST API in Python/Django.
- Quality assurance and assisting in design decisions on front-end React.js application.

Project Management:

- Scrum master: all Jira design, organization, and management.
- Typical Agile environment with daily standups and weekly sprint/scrums meetings.
- Jira issue board design, creation, curation, and triaging.
- Repository management in Bitbucket.
- Team communication and integration automation using Slack.
- Confluence documentation planning, organization, and development.
- Using Jira NextGen Kanban project with product roadmap feature to prioritize epics.
- Using Confluence's Jira templates to write release notes from Jira releases.

DevOps Management:

- Managing software development lifecycle and API lifecycle.
- Developed rules to manage commit quality, such as requiring ticket numbers with all commits.
- Developed rigorous code review process with branch management rules in place for approval of pull requests.
- Using feature and release branches to manage healthy feature releases and hotfixes.
- Utilizing Bitbucket build pipelines to manage automated testing of feature branches.
- Using Jira and GIT to manage release tagging.
- Customer feedback and visual bug tracking through Usersnap.

Site-Reliability Engineering:

- Application performance monitoring using DataDog and Honeycomb.
- Logging, host statistics, infrastructure monitoring, and incident detection using Stackdriver and DataDog.
- Exception reporting and ticket creation using Sentry with Jira integration.
- Uptime monitoring and alerting using UptimeRobot and Stackdriver.
- Incident handling, statuses, and post-mortems through Statuspage.io.

Co-Founder, CTO dotmos, LLC.
{Missoula, Montana}

July 2015 - January 2017

- * **Technical Lead:** driving design and development of technical specifications for key features and tools.
- * **Lead Software Engineer:** front-end and back-end design and development. Used Django, Node.js, and React.js.
- * **Project Management:** development team leader, repository management, issue curation, documentation generation, team communications, and data analysis. Used BitBucket/GIT, Asana, DeployBot, Intercom, Usersnap, Open Analytics, and Slack.

Data Scientist, Software Engineer, etc. **Upstream Research, Inc.**
{Missoula, Montana}

November 2015 - September 2016

- * **Data Scientist:** acquisition and analysis of large geographic-based data sets and creating and updating services in ArcGIS.
- * **Software Engineer:** writing and testing automation scripts in Python and ArcPy; developing ASP.NET application using the MVC framework in C#; designing and implementing unique solutions to novel problems; and writing and supporting custom functions in PostgreSQL.
- * **Quality Assurance:** user-testing, writing reports, writing custom scripts in Python to test REST API endpoints, and load-testing pages and REST API endpoints.
- * **System Administration:** deploying software releases, ensuring server up-time complied with SLA, security updates and patches, and managing Azure resources. Used Azure and Visual Studio.
- * **Customer Support:** interfacing directly with customers and debugging customer and software issues. Used Freshdesk.

Security Consultant **Lake Missoula Group, LLC.**
{Missoula, Montana}

February 2015 - May 2015

- * Handled a diverse client base including banks, hospitals, and retail outlets.
- * Conducted a variety of engagements including:
 - . Internal and External Vulnerability Assessments (IVA, EVA).
 - . Internal and External Penetration Tests (EPT, IPT).
 - . Web and mobile Application Security Assessments (WASA).
 - . Wireless Infrastructure Assessments (WIA).
- * Wrote detailed reports and presented results for each type of engagement.
- * Performed tech reviews on assessments conducted by other consultants.

Senior Software Developer **Hanna-James Enterprises, LLC.**
{Missoula, Montana}

July 2014-February 2015

- * Developed Terminal-Based Test Automation Software in Python.
- * Designed GUI-Based Test Automation Software in Python using GTK and wrote specification documentation in \LaTeX .
- * Developed proof-of-concept prototype for D3-based ToR Network Tracking software in Coffeescript.
- * Wrote specification document for GUI-Based SDK Architecture in \LaTeX .
- * Designed and implemented 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.

Teaching

Teacher's Assistant **Programming Languages**
Teacher's Assistant **Computer Ethics**
Instructor **Computer Modeling**
{University of Montana-Missoula}

Spring 2012

Fall 2011

Fall 2010 - Spring 2011

- * 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.

Mentor **The Firehose Project**
{<https://thefirehoseproject.com/>}

Fall 2014 - Fall 2015

- * Assisted assigned students by answering questions and working through code samples during weekly one hour online video sessions.
- * Assisted assigned students by being available for question and code sample walkthroughs via email during regular office hours.
- * Participated in online video group discussions surrounding larger projects.

Education

University of Montana-Missoula
M.S. Computer Science, emphasis in Machine Learning, Data-Mining, and Simulations

May 2014

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

May 2010

Technical

Languages

- * **Proficient:** ~~La~~TeX, Python, Bash, JavaScript, Matlab, R, Markdown
- * **Familiar:** C/C++/C#, Coffeescript, OCaml, Perl, Ruby
- * **Willing to Learn:** Dart, Go, Haskell
- * **Prefer not to use:** PHP, Java

Frameworks

- * **Proficient:** Django, Django REST Framework, Flask, ASP.NET
- * **Familiar:** Elasticsearch, React.js, Vue.js, Node.js

Favorite Python Modules: BeautifulSoup4, Celery, Matplotlib, NumPy, ØMQ, Pandas, Redis, Requests, SciPy, Scrapy, Spyder

Automation / Multitasking: Celery, Redis, RabbitMQ, ØMQ

Machine Learning: Keras, PyBrain, PyTorch, Scikit-Learn, TensorFlow

Data: Access, CSV, JSON, MySQL, PostgreSQL, RESTful APIs, SQLite, SQL Server, XML, YAML

Data Visualization: D3, Matlab, Matplotlib, R

Design: Twitter Bootstrap, HTML5/CSS3/Sass/Less, Invision

DevOps: Atlassian (Jira, Confluence, Statuspage, Bitbucket Pipelines), Azure, Bitbucket / GitHub (GIT), DeployBot, Docker, Google Cloud Platform, Kubernetes, Mercurial

Development Environments: Atom, Android SDK, PyCharm, SublimeText, VIM, Visual Studio / VSCode, XCode

Development Techniques: Agile Methodology using the Scrum or Kanban frameworks, Behavior-Driven Development, Iterative and User-Centered Design, Rapid Application Development, Test-Driven Development

Communication: Discord, Google Hangouts, IRC, Join.me, Skype, Slack, UberConference, Zoom

APIs: Darksy, Discord, Facebook, Google (Ads, Analytics, Maps, Places, Search Console), Instagram, Mailchimp, Pinterest, Rebrandly, Rezdy, Slack, Twilio (SMS / SendGrid), Twitter, Web CEO, Xola

Bots: Discord, Slack

Network Security: Aircrack-ng, Burp Suite Pro, Kali Linux, Kismet, Metasploit Framework, Nessus, NeXpose, Nmap, Wire-shark/tshark

Operating Systems: Debian and Red Hat-based Linux, Mac OS X, Windows

Selected Projects

A list of some of my favorite personal and graduate projects, not specifically listed in my work experience, that I had the most fun on. The source code for most of the following projects is on GitHub @[blairg23](#). The rest may be in private repositories on Bitbucket [blairg23](#).

Grad Projects

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

Also known as the Abelian Sandpile Model, this Python/Matplotlib application simulates sand being poured on a single point.

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.

Personal Projects

bookmarks-manager

Bookmarks Tagr[©] is a full RESTful API for importing your Chrome bookmarks and creating a highly organized network graph of bookmarks and tags. Notable features include smart tagging, social sharing, up/down voting, and reporting bad links for removal.

BetterPassword

A short script to turn an easily remembered password into a large hashed password for better security in online applications.

create-api-wrappers

Reynold's RESTful Wrapper[©] is an application that creates API wrapper methods in Python from a list of API endpoints and their valid parameters.

delete-files

A short script to recursively remove all files within a given directory, given a regex match.

expense-analysis

Expensive[©] is an application that takes CSV files as input and builds a database of financial transactions to perform financial data analysis tasks, such as analyzing spending habits to build a budget.

files-in-folder

An application designed to perform an md5 hash-wise diff on files in two given directories. Outputs the contents of the folder (filenames and hash) and the diff as a CSV.

images-from-url

An application designed to scrape images off any given URL or REST API. On the last commit, it supported Imgur, Instagram, Tumblr, and any raw HTML website.

Nutflux

A suite of small applications centered around multimedia consumption, Nutflux[©] started as a Netflix clone for consuming your local multimedia collection. Now this suite contains multiple utilities for create a better multimedia experience.

movie-decider

An application that takes your current multimedia collection and helps decide what you want to watch based on a series of mood questions.

movie-file-fixer

An application for formatting poorly formatted movie filenames, adding a movie poster from IMDb, and adding subtitles based on the md5 hash of the file. Recent commits were a huge refactor to add test automations, unit tests, and CI/CD pipeline.

movie-tv-show-reminder

An application that reminds you when your favorite shows have new episodes or a new season.

movie-viewer

A Netflix clone that uses the Plex API to showcase your multimedia collection.

music-file-fixer

Like movie-file-fixer, but for music files.

rename-images-to-datetime

A short script to rename image files to a datetime format based on the datetime the image was produced. Can also format from one datetime format to another. Many cameras name their files like DSC_0001.png, even if that file has already been created. This script's objective was to create unique files based on that unique datetime format.

TweetyPy

A Python Twitter client with a wrapper method for every Twitter REST API endpoint. Powered by Reynold's RESTful Wrapper[©].

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Professional References

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dotmos, LLC.

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Hanna-James Enterprises, LLC.

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