

Fred McDavid



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Profile

Fred McDavid is a capable and versatile engineer, fluent in several programming languages and with a number of databases. He is a full stack developer and has been involved at every level of a number of business application projects, from the HTML and CSS to the application code to the server automation infrastructure that deploys the application to the servers.

When he's not in front of the keyboard, Fred listens to EconTalk, TWIS, and Astronomy Cast while he cultivates hops, builds fences and rehabs old buildings on his farm in Fort Defiance, Virginia.

He is the founder of [Framework Labs](#), a software and systems consulting firm.

Skills

Web: Django, Ruby-on-Rails, Angular, Ionic, JQuery, SASS, Bootstrap
Languages: Python, Ruby, Javascript, Typescript, PHP
Version Control: Git (vanilla, GitHub, and GitLab), SVN, CVS
Server automation: Ansible, Puppet, Vagrant, Capistrano
Distributed Computing: Celery, Resque
ORM: Django, SQLAlchemy, ActiveRecord
Testing: PyTest, RSpec, Cucumber, CircleCI, Gitlab, Jenkins
Databases: MySQL, PostgreSQL, Redis, MemCached, CouchDB, PouchDB
Server Administration: Linux, AWS, Google Cloud, Heroku, Nginx, HAProxy
Cloud/Container: Docker, EC2, GCE, S3, Digital Ocean, VirtualBox, VMWare
Telecommuting: Slack, Campfire, Jira, Basecamp, HipChat, Redmine
Logs/Analytics: NewRelic, SumoLogic, Graphite
Other: Trello, RVM, VirtualEnv

Education

1996

Radford University - Bachelor's Degree in Computer Science

Experience

- Jan 2017-Present* **Framework Labs, Founder, Software and Systems Engineer**
- Developed custom business applications with Python and Django.
 - Developed demo application highlighting offline and multiplatform capabilities of the Angular, Ionic, PouchDB and CouchDB stack.
 - Developed [Corrigible](#), an open source utility that enables re-use of Ansible server automation code.
 - Developed [KCK](#), a self-priming, intelligent cache designed to maximize the performance of data pipelines and data-driven websites.
- Oct 2017-Present* **ZeroCater, Software and Systems Engineer**
- Achieved 25% reduction in test suite execution time.
 - Developed memory profiling code for background tasks.
 - Added simple A/B testing tools for emails and landing pages.
 - Configured Docker-based CircleCI automated testing.
 - Achieved 100x reduction in execution times for several background tasks to remedy queue congestion issues.
- Mar 2014-Dec 2016* **Priceonomics, Software and Systems Engineer**
- Automated the deployment of company software systems.
 - Designed and developed a number of distributed systems developed using Python, Django, and Tornado, deployed in AWS and Google Cloud environments, backed by Postgres and Redis.
 - Developed multi-level cache to prevent stale data and mitigate downtime risk during disaster recovery.
 - Developed a framework for maintaining fresh versions of rendered data products in a high-throughput distributed data-processing pipeline.
- Jul 2012-Mar 2014* **Lightcastle, LC., Contract Software Engineer**
- Added tests and automated deployment of Ruby-on-Rails application.
 - Optimized application code and architecture to enable the application to run on commodity virtual servers.
 - Developed XSLT pipeline for print-to-web processing of medical journals.
- 2007-2012* **Landmetrics, LC., Founder, Software and Systems Engineer**
- Developed distributed pipeline for processing real estate data using Ruby, Perl and Postgres
 - Developed [Sadie](#), an open source data framework designed to minimize the work performed during multi-pass data processing.
 - Automated system deployment and testing.
- 2005-2007* **Middle River Hosting Technologies, LC., Founder, Systems Administrator**
- Server administration. Configured network monitoring service.
- 2001-2005* **Terralogic, Inc., Lead Developer, Systems Engineer and Administrator.**
- Developed systems using Coldfusion and ESRI ArcIMS.
 - Developed web-based emergency operations application for allocation of statewide hospital resources.