# Caleb Madrigal

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## Skills

* Strong communicator (speaker and writer)
* Languages/Platforms:
  + Python (Flask, Django, IPython Notebook/Jypyter, NumPy, SciPy, Matplotlib, Gunicorn)
  + Javascript (Node.js, React.js, AngularJS, Express.js, Underscore.js, Lodash.js, Async.js, jQuery)
  + Objective-C (iOS, Cocoa)
  + C# .NET (ASP.NET, MVC4, NHibernate, Spring.NET)
  + Java EE (GWT, JSF, Spring, Hibernate)
  + C (gcc, sockets, linux, makefile)
* Databases:
  + MySQL
  + MongoDB
  + MS SQL
  + PostgreSQL
  + IBM DB2
  + Sqlite
* Version Control:
  + Git
  + SVN
* Other Tools:
  + Docker
  + Vagrant
  + VirtualBox
  + VMWare Fusion/Workstation
  + Visual Studio
  + IntelliJ
  + PyCharm
  + WebStorm
* Strong algorithms and mathematics knowledge.
* Big proponent of functional programming.
* Linux Server configuration: Nginx, Apache, Gunicorn, Supervisord, Upstart, iptables, sendmail, cron
* Strong working knowledge of Cryptography and Security
* Agile/Scrum practitioner

## Experience

### SpiderLogic

#### Software Consultant, *March 2011 - Present*

##### Client: Wisconsin Lawyers Mutual Insurance Company, 2013-2015

* *Technologies:* Node.js, Express.js, AngularJS, MongoDB, Java, SOAP, Oracle
* Lead a small team to create a web portal for a legacy enterprise Java policy administration system. This portal was implemented as a Single-page App backed by a RESTful API, which is backed by Node.js, Express.js, and MongoDB.

##### Client: Hewins Financial, 2013-2015

* *Technologies:* Java EE, Google Web Toolkit, MySQL, Linux, Python
* Created a web app which enables financial advisors to rapidly model their clients' financial outlook and walk them through various scenarios.
* Made an offline version by wrapping the server software in a VM, and wrote a protection layer around it with Python.

##### Client: MyHealthDirect, 2012-2013

* *Technologies:* C# .NET, ASP MVC4 .NET, Spring, NHibernate, MS SQL, Objective-C
* Wrote Medical scheduling web app
* Wrote Medical scheduling iPad app
* Wrote an ETL tool to transform client-provided data files into a format our DB could handle
* Helped maintain large enterprise API and web app

##### Client: Wipfli (Internal Development), 2012

* *Technologies:* Objective-C
* Wrote insurance risk analysis iPad app

##### Client: SoZo Group, Wipfli (Joint Venture), 2012

* *Technologies:* Javascript, HTML5, CSS3, Joomla CMS, PHP, Linux
* Created web informational portal to provide help to Chinese companies looking to move operations to the US
* Website: <https://chinausportal.com/index.php/en/>

##### Client: ScenarioNow, 2011-2012

* *Technologies:* Java EE, Google Web Toolkit, MySQL, Linux
* Wrote financial modeling software for financial advisors

##### Client: Church Mutual Insurance Company, 2011

* *Technologies:* Java EE, Spring, Hibernate, JSF, IBM DB2
* Wrote Java EE application to manage actuarial statistics for Insurance Rating Software

### Astronautics Corporation of America

#### Software Engineer, *June 2008 - March 2011*

* Wrote software in the C programming language for the Airbus A400M Network Server System (NSS).
* Developed several APIs based on requirements which I gathered from multiple teams.
* Developed company-wide Python coding standard and gave training presentations on Python.
* Wrote a hardware emulator in Python for use in our labs.
* Wrote Software design documents which used UML diagrams to communicate software module design and interactions.
* Authored the Software Requirements Document for one of the components for the NSS in IBM Rational Doors (requirements tracking software).
* Wrote Test Cases, Test Procedures, and Test Applications (in C and Python) to verify requirements.
* Followed DO-178B for process flow, requirements, testing, implementation, etc.

### Hitcents

#### Software Engineer, *August 2006 - May 2008*

* Developing an Enterprise Resource Planning (ERP) system.
* Desktop front-end to ERP in C# .NET/XAML/WPF
* Integrated Microsoft Office with ERP system.
* Wrote socket-level communication system for both the server-side and front-end of ERP.
* Wrote web software for ERP system using Perl, Javascript, CSS, and HTML.
* Developed access control software that uses Radio Frequency Identification (RFID).
* Certified RFID specialist at Hitcents.

### Teksouth

#### Programming Summer Intern, *May 2005 - August 2005*

* Wrote a program that controlled the magnetic front door lock, using MS Outlook calendar as a front end for scheduling.

## Side Projects

### Home Security System

* For fun and security, I built a home security and automation system
* Hardware: RaspberryPi, hacked remote controlled outlet set, hacked magnetic sensor
* Software: Python, Flask, jQuery Mobile

### Other Side projects

* See <http://calebmadrigal.com> for more side projects.

## Speaking

### O'Reilly Open Source Convention (OSCON) 2013

#### Topic: Sound Analysis with the Fourier Transform and Python

* [Presentation Notes](https://github.com/calebmadrigal/FourierTalkOSCON)

### Milwaukee Barcamp 2011

#### Topic: Using Transparent HTTP Proxies for Live Web Traffic Manipulation

* [Code used](https://github.com/calebmadrigal/PythonScripts/blob/master/networking/httpproxyserver.py)

## Education

### Bachlor's in Computer Science - Western Kentucky University

* GPA: 3.80 on a 4.0 scale (Graduated May 2008)
* ACM President of WKU local chapter (2007-2008)
* Future Leader Award in Computer Science (2008)
* President's Scholar at WKU (2007-2008)