

Matthew Colf

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Detail oriented software developer with a specialty in designing and building web applications, web services, and internal tooling. Strong interest in software architecture and complex systems balanced by a desire to keep things simple and maintainable. Passionate advocate for a DevOps culture, growing junior developers, standards compliance, and doing the right thing. Always looking for interesting and challenging projects.

Technical Expertise

Extensive Experience

<i>PHP</i>	Slim	Datadog	AWS SNS/SQS	RAML	Ubuntu/Debian	Confluence
<i>Golang</i>	Silex	New Relic	AWS Aurora	Open API	Mac OS	Active Directory
REST	Twig	Fastly	AWS CodeDeploy	OAuth	DNS	
GraphQL	Composer	AWS S3	AWS API Gateway	OpenID Connect	Git & Github	
Docker	PHPUnit	AWS EC2	HTML	Apache	Subversion	
CircleCI	Redis	AWS ECS	JSON	Nginx	Wordpress	
Symfony	Doctrine	AWS Lambda	XML	Windows	JIRA	

Moderate Experience

<i>Node.js</i>	<i>Ruby</i>	Vue.js	Postgres SQL	AWS KMS	Ruby on Rails	LDAP
<i>Javascript</i>	<i>C/C++</i>	Dep	AWS IAM	Mockery	Java	
<i>Terraform</i>	<i>Bash</i>	Jenkins	AWS Kinesis	Solr & Lucene	SQLite	
<i>CSS</i>	<i>Express</i>	MySQL	AWS Secrets	JQuery	QT	

Some Exposure

<i>Typescript</i>	<i>C#</i>	<i>Erlang</i>	<i>Elixir</i>	OpenGL		
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Experience

Senior Software Engineer

Red Ventures, Detroit MI
August 2017 – Present

Develop and maintain performant, secure, scalable, and standards compliant web applications and services that create the best possible end-user experience. Engage with product owners and business leaders to create solutions that support current business priorities, allow for future flexibility, and are sustainable in the long term. Follow and advocate for DevOps best practices by leveraging code reviews, infrastructure as code, CI/CD, and working closely with infrastructure teams. Mentor junior team members and create a culture that encourages learning and growth.

Senior Software Engineer

Quicken Loans, Detroit MI
June 2013 – August 2017

Develop and maintain web applications, tooling, and libraries for other development teams that allow them to develop, deploy, configure, and test software in a flexible and self-service manner. Research, evaluate, and develop proof of concept implementations for new technologies, standards, and methodologies to create recommendations, libraries, and tooling. Provide technical leadership to other teams in the form of consulting, standards development, code reviews, mentoring, and training sessions that make it easier for them to follow modern best practices.

Software Developer

PayAnywhere Development Group, North American Bancard, Troy MI
March 2012 – May 2013

Architect, develop, and maintain web applications and services that allow both users and support staff to manage payment accounts, search for transactions, and conduct reports. Proactively engage in security best practices to ensure the safe storage and transmission of personal and financial information. Collaborate closely with business stakeholders to develop time-critical solutions in an agile team development environment.

IT Consultant

Departmental Computing Organization – University of Michigan, Ann Arbor MI
September 2006 – March 2012

Work with faculty and staff to develop software, build highly customized computer hardware, and provide technical support and hardware repair in support of research needs. Maintain a small Tier 2 machine room. Design and maintain high-use conference and video telephony rooms. Train, manage, and schedule student employees.

Audio & Video Technician

Michigan League – University of Michigan, Ann Arbor MI
November 2005 – May 2008

Provide video services, live audio reinforcement, and technical support during client events in the facility.

Computer Hardware Technician

Computer Aided Engineering Network – University of Michigan, Ann Arbor MI
September 2004 – April 2006

Diagnose and perform Dell licensed in-warranty computer repairs. Maintain 25+ engineering computer labs.

Computer Technician

Laingsburg Community Schools
November 2001 – August 2004

Maintain network services and computer labs, diagnose and repair workstations, and provide technical support.

Projects

Service Virtualization Tool, Developer (Quicken Loans)

November 2016

A service virtualization system that allows developers and testers to create mock web services in order to test failure scenarios, run integration tests, perform load testing, and otherwise develop against services that either don't currently exist or that cannot be used for that scenario because of licensing, security, cost, or other reasons.

PHP, Postgres, Redis, Slim, REST, Siren Hypermedia API, JSON, JSON Schema, JSON Web Token

Rocket Mortgage Mobile API, Developer (Quicken Loans)

November 2015

Designed to provide data services for the Rocket Mortgage Android and iOS applications. Provides authentication, auditing, loan data, OCR services, document upload, preference management, and client communication endpoints through a JSON REST API.

PHP, Slim, Guzzle, JSON, JSON Web Token, LibSodium, AWS DynamoDB, AWS SQS, AWS S3, Redis

HAL 9000, Developer (Quicken Loans)

January 2015

A Docker based build and deployment tool that provides a self-service way for developers to rapidly test and release their code. Supports both manual and automated build and deployment scenarios, custom Docker build containers, full rollback support, and a number of deployment strategies including rsync, AWS Code Deploy, AWS S3, and manual retrieval. Integrates with LDAP, Github Enterprise, SonarQube, and AWS.

PHP, Slim, Twig, Guzzle, Symfony Console, Phing, Rsync, AWS API, Github API, Docker, LDAP, Doctrine, Bash Scripting, MySQL, Redis, JQuery

Single Sign-On Proof of Concept, Developer (Quicken Loans)

July 2014

Developed as a usable proof of concept, this project leveraged OAuth 2.0 and OpenID Connect to provide highly scalable and unified end user authentication, authorization, and session management services for all client facing Quicken Loans applications and web properties.

PayAnywhere Inside, Project Lead (North American Bancard)

April 2014

Developed to replace the current PayAnywhere account management application, the new PayAnywhere Inside application serves as the first point of contact for merchant account customers to review their transaction history, observe trends, generate reports, manage their business information, and request support.

PHP, Symfony2, Twig, OAuth2, PostgreSQL, Doctrine, Solr/Apache Lucene, Ajax, JQuery

North American Bancard Federated Login System, Project Lead (North American Bancard)

March 2013

Developed to unify the customer authentication experience across all brands, web, and mobile applications, this system implements OAuth2 standards compliant authentication endpoints. Built mostly on Symfony and Apache, it consists of several distinct applications that work together, in real time, across multiple load balanced instances – a web based accounts application, web service endpoints, database layer, Symfony dependency injection services, and a Symfony security component and firewall listener.

PHP, Symfony2, Twig, OAuth2, PostgreSQL, Doctrine

PayAnywhere Corporate Website, Developer (North American Bancard)

December 2012

Developed by North American Bancard, PayAnywhere allows merchants to easily accept credit card payments on their Android, iOS, and Blackberry mobile devices. In conjunction with a national marketing campaign, the corporate website was redesigned from the ground up using modern best practices. As the main public facing website for PayAnywhere, this site acts as a gateway for new merchant boarding, marketing landing pages, and referral processing.

PHP, PostgreSQL, Symfony2, Twig, JQuery, HTML5, CSS3

EECS Wiki Management System, Lead Developer (University of Michigan)

March 2012

Developed to replace an older unmaintainable wiki system, this system was written from the ground up to be maintainable, upgradeable, and easy to extend. Based on the popular MediaWiki, well known as the code that runs Wikipedia, the wiki manager incorporates features that reduce staff time requirements - including Cosign integration, dynamic group permissions, bulk permission imports, one-click site creation, and automated update scripts.

PHP, MySQL, MediaWiki, Cosign, HTML, CSS

GeoFox Service & Mobile Applications, Developer

December 2010

The GeoFox service and applications for Android and iOS took location aware check-in applications to the next level before it was cool. By tracking user location history, correlating locations to real places, and matching history with similar users, the service was able to provide recommendations for new places to check out.

PHP, MySQL, JSON, Yelp API, Android, Java

EnRoute Service & Mobile Applications, Developer

April 2011

Developed as part of the Cloud Computing in the Commute course, the EnRoute service and suite of applications for Android, Ford Sync, and web leverage the power of location aware devices to ease the process of carpooling. Using a custom built real-time API, the application allows for instant communication, dynamic route planning, suggested stops, arrival time estimates, and route optimization.

PHP, MySQL, Code Igniter, JSON, Google Maps API, Android, Java

CashTrack Android Application, Developer

April 2010

CashTrack is a collaborative expense sharing application for Android that allows users to create, split, edit, and share expenses with their friends in real time. Built on an extensible real-time API, users are able to create expenses at the time of purchase, select the friends they want to split with, and the split bill will pop up in each friend's phone in real-time.

EECS Checkout System, Lead Developer (University of Michigan)

June 2009

Replacing previously used paper tracking methods, this checkout system allows EECS staff to track short and long term software and equipment loans by users. By leveraging automated processes, reminders, and user history tracking, the system was able to greatly reduce the occurrence of unreturned items and save the department thousands of dollars during the first semester of use alone.

PHP, SQLite, HTML, CSS, Cosign

Education

Computer Science Engineering, BSE (2011)

University of Michigan, Ann Arbor, MI

Topics & Areas of Focus

- Back-end web (PHP, MySQL, Ruby) and web service (PHP, Json, XML, Rest) development.
- Smartphone application development (Android).
- C, C++, Java, and Ruby application development.
- Database driven development.

Noteworthy Courses

- Cloud Computing in the Commute (EECS 489)
- Development for Smartphones (EECS 498, 499)
- Web Databases and Information Systems (EECS 484, 485)
- Web Service Development (EECS 497, 498, 485)
- User Interface Development (EECS 493)
- OpenGL Computer Graphics (EECS 487)
- Cryptography (EECS 475)
- Artificial Intelligence (EECS482)
- Operating System Development (EECS 482)

Laingsburg High School (2004)

Laingsburg, MI

Activities & Community Service

- Provides freelance IT consulting, web development, and infrastructure management for multiple clients.
- Taught at summer video production camp for high school students and teachers (MIPA).
- Volunteered with high school theater groups (design, lighting, construction, and special effects).

Honors & Awards

Outstanding Customer Service Award

University Unions – University of Michigan

Graduated Summa Cum Laude

Laingsburg High School

Recipient, 1st Place Nationally for Video Production work

Journalism Education Association

Eagle Scout

Boy Scouts of America