Shaun Michael Verch

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Work Experience

Site Reliability Engineer, U.S. Digital Service — July 2016 - Present

- Created roadmap to safely update 17 years of legacy code
- Identified and remediated hundreds of critical security vulnerabilities
- Launched login.gov on AWS, Terraform, and Chef, now supporting 5 million users
- Supported quiet launch of qpp.cms.gov across 6 remote DevOps teams
- Built shareable Terraform/Ansible frameworks to reduce error prone duplication

Site Reliablility Engineer, URX — April 2015 - April 2016

- Primary maintainer for all of URX's base infrastructure
- Automated deployment using Jenkins, Mesos, AWS, Github and Ansible
- Distributed data pipeline built on HDFS, HBase, Mapreduce, Spark, and Kafka
- Designed and implemented a fully replicated multi-master datacenter setup
- Managed 5+ engineers and 30+ services in zero downtime datacenter upgrade
- Created disaster recovery, incident triage, security, and ownership policies

Platform Software Engineer, URX — August 2014 - March 2015

- Created lock free high performance persistent crawler queue
- Worked with Spark based analytics ETL to add support for new datatypes

Database Systems Engineer, MongoDB — August 2012 - June 2014

- Core contributor and maintainer of the MongoDB database
- Built C++ dependency analysis tool to untangle massive technical debt

Storage Engineering Intern, NetApp — June-August 2011, 2012

- Wrote automation and enhanced SCSI support for NetApp disk arrays

Education

B.S. in Mathematics / Computer Science - Brown University, Providence, RI
M.Sc. in Computer Science - Brown University, Providence, RI

University Coursework

Computer Security, Operating Systems, Computer Networks, Algorithms, Programming Languages, Embedded Microprocessor Design, Multiprocessor Synchronization, Abstract Algebra, Real Analysis, Complex Analysis, Number Theory, Cryptography

University Projects

Weenix - Implemented small Unix-like OS and ported from Xen to x86 emulator
Capriccio Threads - Experimental work on light weight userspace threads library
TCP over UDP - Implemented the TCP/IP protocol using UDP as link layer

Teaching Experience

Conference Talks:	OSCON, MongoDB Days, Scale 11x, NoSQL Now
Online Class:	M101JS: MongoDB for Node.js developers
Teaching Assistant:	Operating Systems, Computing, Multivariable Calculus

Software Experience

Languages:	C, C++, Intel x86 assembly, MIPS assembly, Bash, Perl, Python, Ruby, Java, Scala, Golang, Javascript, PHP
Operating Systems:	Linux, FreeBSD, MacOS
Datastores:	MongoDB, AWS (Redshift, RDS, S3), Kafka, Elasticsearch, HBase, HDFS, Ceph, Zookeeper
Data Processing:	Hadoop Mapreduce, Apache Spark
Operations:	AWS, Ansible, OpenVPN, Bind DNS, LDAP, sssd, Apache Mesos, Jenkins CI, Chef, Terraform