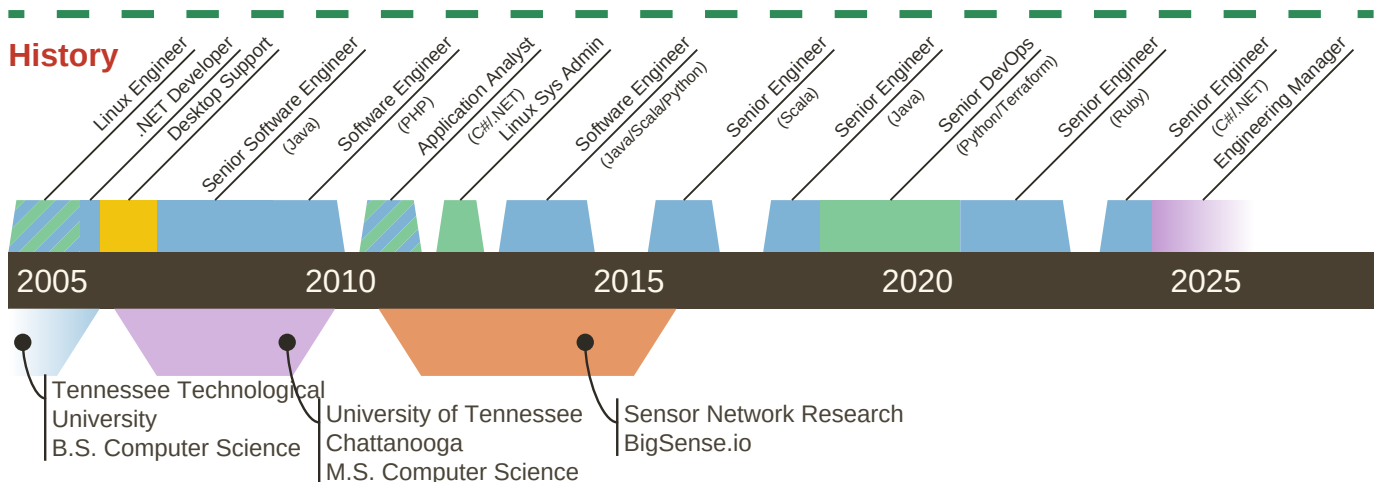


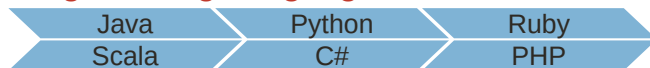
Sumit Khanna

 sumit@penguindreams.org
 @sumit:battlepenguin.im
 <xmpp:ohio@xmpp.sumit.im>
Contact

I've been in technology for over twenty years, specializing in software engineering, infrastructure and devops. My strongest programming languages are Scala, Python, Ruby and Java. I've written software for a multitude of industries including healthcare, travel, energy, government and education. My system administration experiences began with shell scripts to automate the management of servers, clusters and workstations in the early 2000s. Since then, I've worked with hypervisors such as VMWare and Xen. I've used Terraform with hosting providers such as Digital Ocean, Amazon Web Services and Azure. I moved from shell scripts to configuration management tools such as Ansible, CFEngine, and Puppet in what has become the emergent field of devops. I consider myself highly qualified in roles involving backend software engineering and infrastructure, but am adaptable and capable of quickly picking up new technology stacks.



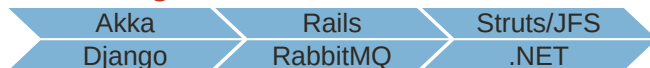
Programming Languages



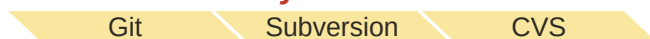
Infrastructure and DevOps



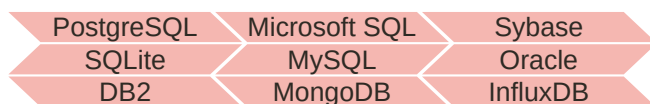
Technologies and Frameworks



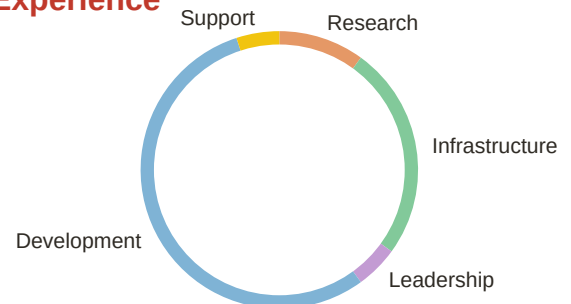
Version Control Systems



Databases



Experience



Services I've Setup and Administrated

- AWS/Terraform, kops (kubernetes)
- E-mail (Courier POP/IMAP + Postfix)
- DC/OS Mesosphere / Docker
- Apache Web Server, nginx, Tomcat, JBoss
- Active Directory and OpenLDAP
- OpenVPN / WireGuard
- Shibboleth (SAML2 Single Sign-On)
- DNS (BIND, Active Directory and Unbound)
- Puppet, Ansible and CFEngine
- Alfresco, Alfresco Share
- Confluence, Jenkins, Bamboo, Jira

Website

Code

PenguinDreams.org

gitlab.com/djsumdog

forge.sumit.im/djsumdog

github.com/sumdog

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Sumit Khanna

sumit@penguindreams.org

http://penguindreams.org

Education

University of Tennessee Chattanooga (2005 – 2009)

- Graduated with a Master of Science in Computer Science
- Thesis: “Breaking the Multi-Colored Box: A Study of CAPTCHA”

Tennessee Technological University (2000 – 2004)

- Graduated with Bachelors of Science in Computer Science
- President of Association for Computing Machinery (2003 - 1 year)
- Association for Computing Machinery Executive Board (2004 - 1 year)
- Vice President/President Golden Eagle Sports Car Club (2003 - 1 year)

Independent Research

April 2015 – 2019

BigSense.io

BigSense was an independently funded open source environmental sensor network system. Originally called GreenOven, it was built with a grant from the City of Cincinnati to monitor storm water runoff. The REST web service was written in Scala and the LtSense client was written in Python. Packages were built for Debian, Ubuntu, CentOS and openSUSE. BigSense was used in a 400 level Geography class at the University of Dayton. Project is currently unmaintained.

Work Experience

September 2025– *current*

U.S. Xpress

Chattanooga, TN

Engineering Manager (Full-time)

- Manage a team of 7 developers working on large and small scale projects, GIS and support
- C#, .NET Core 8.0, Kafka, MongoDB, Kubernetes, AWS
- Logistics software and backend services

January 2022– March 2025

OysterHR

Remote

Senior Software Engineer (Full-time)

- Developed mostly backend Ruby on Rails, with some frontend in React
- Stack included Heroku, Postgres, Redis, Nix, Avvoka (documents), Harness (CI), Github Actions
- Projects included hiring, contract management, international tax calculations, salary analytics

February 2019– December 2021

Guaranteed Rate

Chicago, Illinois

Devops Engineer (Full-time)

- AWS Resource Provisioning using Terraform, Packer, and Ansible
- Additional projects in Python, Go and Groovy
- Administered Jenkins, kops (kubernetes), Confluence and Vault

February 2018– September 2018

The Marketing Store

Chicago, Illinois

Senior Software Engineer (Full-time)

- Developed software using Java 8, RX Java2, Vertx
- Administered: Jenkins, OpenVPN, AWS ECR, Build and testing pipelines
- Worked on a green field backend service for the McDonalds Monopoly game.

February 2016 – May 2017

Getty Images

Seattle, Washington

Senior Software Engineer (Contracted through APEX Systems)

- Development for media asset processing micro-services
- Scala, Akka, Akka Persistence, RabbitMQ, PostgreSQL
- Devops work involving Python, Docker, DC/OS Mesosphere, CoreOS, Consul

May 2013 – March 2015 **Catalyst IT** Wellington, New Zealand

Software Engineer (Full-time)

- Department of the Prime Minister and Cabinet (Alfresco development)
- Telecom/Spark (web and backend development – Java, Scala, Akka, Puppet, Vagrant)
- OpenStack (Security)
- Ministry of Education (Python, Django)

May 2012 – November 2012 **AOT Group** Melbourne, Australia

System Administrator (September 2012 – November 2012, Contracted)

- Assisted with production data center migration from Brisbane to Melbourne
- VMWare vSphere 5.0, OpenSUSE 11.4, CFEngine Administration
- Active Directory, Power Shell

Developer (May 2012 – August 2012, Contracted)

- PHP Web Application Development with PostgreSQL database
- OpenSUSE 11.4 Server / 12.1 desktop and Subversion version control

January 2011 – November 2012 **Urbanalta Technologies** Cincinnati, OH

Computer Scientist (September 2011 – November 2012, Part-time)

Researcher (January 2011 – September 2011, Volunteer)

- Embedded Linux development (OpenWRT)
- Server/Client software development (Scala 2.9 / Python 2.7 / Python 3 / CPython Extensions)
- Windows 2008, OpenSUSE 11.4/12.1 System Administration
- VMWare vCloud and XenServer Virtualization and Infrastructure Design
- 1-Wire remote sensor development

February 2011 – March 2012 **University of Cincinnati** Cincinnati, OH

Application Analyst (Full-time)

- Identity Management / Implemented Federated Single Sign-On using Shibboleth/SAML2 for InCommon
- Developed web applications and service with Microsoft C# MVC2, WCF
- SuSE Enterprise 11 and Windows 2008/IIS7 System administration
- Administered Confluence, Jira, Replieweb, iRise Definition Center
- Bash and Python scripting; SSIS and BizTalk development

August 2010 – November 2010 **Ascendum Solutions LLC** Blue Ash, OH

Software Engineer (Full-time)

- TOMS Shoes e-Commerce / Web
- Extended modules and templates for Magento Enterprise 1.6 and 1.9
- Utilized PHP5, MySQL, Redhat Enterprise, CentOS, Subversion

April 2010 – July 2010 **PowerNet Global Communications** Fairfield, OH

Software Engineer II (July 2010, Full-time)

Java Developer (April 2010 – July 2010, Contracted through PSIGroup)

- Development for existing Java desktop application using Swing / JIDE
- Development for Enterprise Java Beans (EJBs) and scheduled jobs running on JBoss
- Utilized Oracle 10g, Eclipse 3.4, Apache Ant, JBoss 4.0, Linux CentOS, JReport 7
- Linux shell scripting on CentOS for maintenance and diagnostics

January 2010 – March 2010 **General Electric Aviation** Evendale, OH

Software Engineer (Contracted through Tata Consultancy Services / Clairvoyant Techno Solutions)

- Developed internal REST web services on JBoss 4.3 / Java 1.5 / RestEasy API
- Enhanced existing JSF / RichFaces web application
- Utilized Eclipse 3.3, Apache Ant, Spring 3.0 and Oracle 10g Databases

June 2007 – December 2009 **BlueCross BlueShield of TN** Chattanooga, TN

Senior Programmer (August 2008 – December 2009, Full-time)

Programmer (June 2007 – August 2008, Full-time)

- Developed applications (standalone and web) and web services to support e-Business
- Platform: J2EE on IBM WebSphere 6.0/6.1 / AIX
- Created SSIS Packages, maintained DTS packages and utilized Sybase, SQL Server 2005 and Active Directory
- Converted legacy ASP applications into Java applications and web services building upon SOA
- Administered and Developed for Interwoven Teamsite and OpenDeploy servers

May 2006 – June 2007 **Tennessee Valley Authority** Chattanooga, TN

Desktop System Specialist (Internship)

- Remotely diagnosed, troubleshot and resolved computer and phone problems
- Trained to use HP Service Desk software

April 2006 – May 2006 **Incentium** (Formerly VIPGift) Chattanooga, TN

.NET Developer (Full-time)

- Developed for and maintained Visual Basic.NET standalone applications
- Designed applications for existing ASP.NET framework
- Worked with Microsoft SQL 2005 Databases and SSIS packages

April 2005 – March 2006 **TigerTranz** Chattanooga, TN

Linux Software Engineer (Full-time)

- Managed Network Security, Firewalls, Linux Servers, LDAP and Spam/Virus Filters
- Wrote several applications in Java, PHP5, C/C++ and MySQL
- Developed documentation for administrators, developers and end users

2001-2003 **TTU Computer Science Labs** Cookeville, TN

Unix System Administrator (Student Position)

- Installed, Updated and Maintained a cluster of 26 Red Hat Linux computers and mail server
- Kept track of lab workers' payroll and hours

2000 **SurfNChattanooga** Chattanooga, TN

HTML/Graphics Designer (Part-time)

- Designed HTML templates for commercial websites and graphics using LView Pro

Publications

Open Source REST Services for Environmental Sensor Networking

Rettig, Andrew J., Sumit Khanna, and Richard A. Beck.
Applied Geography (2014).

An Open Source Software Approach to Geospatial Sensor Network Standardization for Urban Runoff

Rettig, Andrew J., Sumit Khanna, Dan Heintzelman, and Richard A. Beck.
Computers, Environment and Urban Systems 48 (2014): 28-34.

Monitoring Permeable Paver Runoff with an Open-innovation Geospatial Sensor Network

Rettig, Andrew J., Sumit Khanna, Richard A. Beck, Quinn Wojcik, and Carmen A. McCane.
International Journal of Digital Earth (2014): 1-17