

Summary

Experienced polyglot software engineer and consultant with a background in computer science, geographic information science, and mathematics. Creative yet pragmatic in development and implementation, as well as problem resolution. Excellent written and oral communication skills and interpersonal dynamics, with proven ability to effectively use those skills to ensure transparency and agreement between technical and non-technical stakeholders. Engaged and knowledgeable individual that is goal-oriented, proactive, and effectual.

Education

Credit Hours towards Aug 2012 - Dec 2013

Masters in Computer Science

University of Tennessee at Chattanooga

Post-Baccalaureate in Computer Science July 2011 - May 2012

University of Tennessee at Chattanooga

- Graduate Teaching Assistant for two (2) semesters.
- Graduate Research Assistant for two (2) semesters.

Bachelor of Arts in Geography Aug 2007 - May 2011

University of Tennessee at Knoxville

- Award recipient at the Exhibition of Undergraduate Research and Creative Achievement (EURéCA).
- Tutor at the UTK Math Tutorial Center.

Certifications

- AWS Certificated Developer - Associate
- Adobe Certified Expert Flex 4.5

Skills

JavaScript & Web Technologies

ES2015, NodeJS, ExpressJS, ReactJS, AngularJS, Babel, Yarn, Webpack, Web Assembly

Java

Java SE 12, Jakarta EE, Maven, Gradle, JUnit, Mockito, Java Persistence API (JPA), Hibernate, Spring Framework, Spring Boot, Spring Web MVC, Spring Data, Spring Security, Spring Batch, Micronaut, Lombok, Immutables

Databases & Datastores

Oracle + PL/SQL, PostgreSQL + PL/pgSQL, PostGIS, MySQL, Redis, MongoDB, DynamoDB, Lucene/Solr

Amazon Web Services

Lambda, API Gateway, VPC, EC2, S3, EBS, IAM, ELB, Route 53, RDS, DynamoDB, AWS CLI

DevOps

Jenkins, Docker, Ansible, Packer, Terraform, Consul, Nomad

GIS

ArcGIS Pro, ArcSDE, QGIS, GDAL, PDAL, PCL, CGAL, Geotrellis, MapBox

Software Engineering

Test-Driven Development (TDD), 12-Factor Applications, Serverless, Unified Modeling Language (UML), Domain-Driven Design, Enterprise Integration Patterns (EIP), Inversion of Control (IoC), Aspect-Oriented Programming (AOP), Object-Relational Mapping (ORM), Continuous Integration (CI), Continuous Deployment (CD), Configuration Management, Container Orchestration, Service Discovery

Computer Science

Algorithms and Datastructures, Programming Methodology, Systems Programming, Theory of Programming Languages, Theory of Computation, Computer Architecture, Computer Networks, Parallel Algorithms, Cloud Computing, Mobile Computing, Systems Software, Computational Geometry, Machine Learning

Geographic Information Science

Coordinate Systems and Projections, Spatial Statistics, Geostatistics, Geovisualization, Spatial Decision Support Systems (SDSS), Geographic Information Systems (GIS), Cartography

Mathematics

Set Theory, Graph Theory, Combinatorics, Probability, Differential Equations, Calculus, Linear Algebra, Statistics

Experience

Software Developer April 2014 - Aug 2018
BNL Consulting, LLC.

- Designed, developed, or contributed to seven (7) client projects.
- Designed and implemented microservices to automate internal workflow components and processes for client's existing commercial SaaS offering resulting in a geometric increase in customer capacity.
- Technical lead for internal R&D project that containerized our commercial SaaS application and subsequent deployment using Infrastructure-as-Code, configuration management, container orchestration, and public/private cloud platforms that was later included in our product offering.
- Core developer for two (2) year client project that entailed refactoring existing application from .NET to Java, implementing RESTful web services, improving ETL and analytics processes, expansive search functionality, and data modeling.
- Contributed to the development of business intelligence / analytics web applications utilizing NodeJS, AngularJS, and d3.js.
- Authored blog posts [Cloud-First Microservices: AWS API Gateway and Lambda in Action](#) and [Visualizing Clusters with ArcGIS for Flex](#).

Experience (cont.)

Open Data Specialist

Chattanooga Public Library

Feb. 2014 - April 2014

- Coordinated and consulted with the Mayor's Office and various departments to identify and disseminate government data to the public.
- Evaluated available data portal solutions and managed chosen platform.

Consultant

Self-Employed

Jan. 2014 - Feb. 2014

- Configured, deployed, and designed a WordPress instance for the client.
- Produced thematic maps for one-hundred seventy (170) miles of the Etowah River Water Trail.

Graduate Research Assistant

University of Tennessee at Chattanooga

May 2013 - Oct. 2013

- Contributed to the development of a distributed geospatial web application within the context of the Thrive 2055 initiative.
- Additionally, developed an Android application for the collection of WiFi signal strength and location data for the campus of the University of Tennessee at Chattanooga.

Software Developer

SecondSite, LLC.

May 2012 - Aug. 2012

- Contributed to the development of an augmented reality (AR) mobile application for the Smithsonian National Museum of African American History and Culture.
- Contributed to the development of an augmented reality (AR) mobile application that provided an innovative system for the maintenance of art and artifacts.

GIS Consultant

Self-Employed

Feb. 2012 - April 2012

- Provided consulting services to SecondSite, LLC and the SimCenter Enterprise for Disaster Mitigation Plume/Evacuation Scenario Modeling as part of the U.S. Ignite Initiative.

Graduate Teaching Assistant

University of Tennessee at Chattanooga

Jan. 2012 - May 2012

- Graded papers, assisted in labs, proctored exams, and on occasion stood in for my professor during class lectures.

Graduate Research Assistant

University of Tennessee at Chattanooga

Jan. 2012 - May 2012

- Conducted self-directed research on mobile indoor navigation systems using WiFi signal strength, Gaussian processes, cloud computing, the Android framework, and the R language.

Web GIS Developer

University of Tennessee at Chattanooga

June 2011 - Dec. 2012

- Assisted in the deployment and management of ArcGIS Server and ArcSDE databases.
- Collected, documented, and organized spatial information for a sixteen (16) county region.
- Developed RESTful geoprocessing tasks and implemented ArcGIS API for Flex web application to consume them.

Intern

Tennessee Valley Authority

July 2010 - Aug. 2011

- Designed and implemented enterprise spatial database of bathymetric point data for TVA's reservoir system, including data management, documentation and metadata, and the production of TIN and raster models.
- Upon request, I fulfilled client tasks pertaining to the data such as cross-section analysis and spatial queries.

Math Tutor

University of Tennessee at Knoxville

Aug. 2008 - May 2010

- Tutored students at the UTK Math Tutorial Center on material ranging from Calculus I to Calculus II and proctored exams.

Lifeguard

Sportsbarn

May 2008 - Aug. 2008

Lifeguard

YMCA

May 2006 - Aug. 2007

Cashier

Carmike Cinemas

May 2005 - Aug. 2005

Founder and Owner

LoserLabeled.com

Jan. 2003 - Dec. 2005

- Loserlabeled.com was a website with a focus on skateboarding that offered original articles, tutorials, media, and a vibrant user community.
- It was designed and developed with two partners that utilized search engine optimization (SEO) techniques and Google AdSense program to generate profitable advertising revenue.