

# Justin Bridwell

## GIS Applications Developer/Web Developer

Ashburn, VA 20147

[jcbriewe@gmail.com](mailto:jcbriewe@gmail.com)

(919)770-3648

A certified GISP and CFM, I currently works as a GIS developer specializing in pythonic and sql-based data solutions and web applications at Dewberry. Experienced in developing both ESRI (ArcGIS API for Javascript) and FOSS-web-based solutions on frameworks including React, NodeJS, and ASP.Net (C#), I also create a variety of Python-based automation, web scraping, and data analysis scripts and tools, primarily focused on transportation and flood hazard mitigation projects. I previously worked as a GIS applications engineer, helping to design, build, test, and maintain web-based GIS solutions on both the client (front-end) and server-side(back-end) components utilizing modular Javascript, Coffeescript, CSS/SASS, Bootstrap, JSON, and HTML. I am well versed in applying a variety of API's, libraries, and modules including JQuery, Knockout, Flot, Leaflet, MapBox, ESRI, and Openlayers as well as developing and writing test code for Mocha and the NightwatchJS (Selenium) framework.

In addition, I have worked as a GIS Manager for a small agronomics company and a GIS Analyst for a communications company, performing geospatial analysis and cartography, developing web application capabilities with ArcGIS Online and Web AppBuilder (Developers Ed.), customizing widgets, and creating tools and Python scripts for ArcGIS 10.x. I am comfortable using the DevOps and Agile/SCRUM development methods with tools such as MS Teams, JIRA, and Confluence in conjunction with Tortoise HG/Mercurial, Github, and Rhode Code for version control and code reviews. I continually works on a variety of personal projects using Javascript, Java, REACT, and Ruby on Rails and deploys them using PaaS such as Heroku and Azure in order to build and maintain my technical skillset. I am currently focused on projects related to flood plain management, hazard mitigation, and disaster resilience tools as well as migrating Python workflow scripts to PostgreSQL. I am most interested in projects that leverage cloud architecture such as Docker, ArcGIS Online, and AWS instances for more efficient and stable development. Recently, I was deployed with FEMA, working as a lead analyst on the COVID response and after-action review for the Continuous Improvement Program (CIP) and was awarded a Certificate of Achievement for my efforts.

Authorized to work in the US for any employer

## Work Experience

---

### GIS Developer III

Dewberry Engineering INC - Fairfax, VA

July 2018 to Present

I develop, test, and deploy web-based geospatial solutions for internal and client consumption. I also develop, test, and deploy a variety of data analytic, automation, and web scraping tools using javascript, python, and sql. I utilize, analyze, model, and create big data and complex datasets for data science and engineering projects. I manage and maintain SQL databases, geospatial databases, GIS servers, and API/REST web-services. I document procedures and methodologies and maintain version control repositories. Current projects focus on transportation, natural disaster resilience, and flood hazard mitigation as well as data visualization and workflow automation. In addition, I help train new developers, research, recommend, and present new technologies to staff, and work with project managers to cultivate client

relationships by providing cost-effective, quality solutions and services with an attention to detail and customer responsiveness.

## **Document Management and Data Analyst**

DHS FEMA (Contractor) - Washington, DC

March 2020 to March 2021

Lead a team to manage the collection, archiving, and querying of documents on a MS Sharepoint/Teams library. Performed research, analysis, and visualization on a variety of qualitative and quantitative datasets related to the FEMA COVID response as part of the after-action review efforts for the Continuous Improvement Program (CIP). Streamlined and automated the form collection and reporting process for vaccination efforts. Lead MS Teams and OneNote training class. I was awarded the FEMA Certificate of Achievement.

## **GIS Analyst/High Level Estimator**

Lumos - Waynesboro, VA

April 2018 to July 2018

Researched and mapped geospatial layers for fiber optics capable locations. Created detailed reports of optimal-site locations for laying fiber optics lines based on research. Provided staff support for locational reporting and descriptions of fiber optics layers. Trained new analysts and maintained geospatial databases.

## **GIS Manager**

Tellus Agronomics - Orange, VA

January 2018 to April 2018

Managed geospatial analysis processes with a focus on improvement, innovation, and value-added production. Created Python scripts and model tools to streamline workflow. Developed web applications for field use with Web App Builder (Developer's Edition) and Arc Collector. Leveraged ArcGIS Online to serve web applications and create cartographic products. Worked directly with partners and clients to create agronomic analysis products for variable rate planting and fertilizer prescriptions.

Skills and technologies utilized for this job include:

- GIS Analysis using Arc Desktop 10.4
- ArcGIS Online
- ESRI Web App Builder(Developer's Edition)
- Arc Collector
- Python 2.7
- ArcToolbox Model Builder
- MS Access/Excel w/ Pivot Tables
- Process Street Workflow Management
- PostgreSQL/PostGIS

## **GIS Applications Engineer**

IGS/Hexagon US Federal - Reston, VA

February 2016 to January 2018

Planned, designed, developed, maintained, and improved web-based geospatial software solutions for commercial and government clients. Development based on customer requirements in collaboration with project managers and engineering team using the SCRUM/Agile process. Write code for initial development and system improvements. Perform manual testing of APIs and product throughout

development and maintenance process. Write code for automated testing commands. Identify bugs and regression issues and recommend improvements in UX.

Skills and technologies utilized for this job include:

- Used the following frameworks for applications development: NodeJS, Ruby on Rails, .NET (w/Visual Studio). Limited knowledge of AngularJS.
- Library tools utilized for styling, functionality, and geoprocessing: Bootstrap, JQuery, Openlayers, Foundation, Skeleton, Knockout, Leaflet, Flot, + more
- Version Control/Repositories: Git/Github, Tortoise HG (Mercurial), Bitbucket
- Cloud based PaaS/IaaS used for deployment and enhancement: Heroku (platform-as-a-service), AWS
- Languages used for application coding and training: HTML5/CSS, Javascript, Coffeescript, Ruby, Python
- Other tools used for development or training: Apache Maven (for build automation), MongoDB and SQL Lite (database), NightwatchJS (automated Selenium driven testing framework), Postman (API testing)

## **Asset Management Software Analyst**

IBM - Durham, NC

March 2013 to January 2016

Analyzed asset management data for multiple public and private accounts. Worked with internal and external customers supporting IBM asset management tools. Managed asset scan information using database tools. Resolve asset scan problems for customers. Coordinated with global software team to update asset management data. Developed procedural workflows for scanning on new accounts. Update metrics database. Trained new asset management personnel. Skills and technologies used for this position include:

- Working with customers to scan, evaluate, and track IT assets
- Provide support and software troubleshooting
- Asset Tracking & Planning (ATP) tools
- Tivoli Integrated Solutions Console
- IBM SigBank
- TRAILS (asset scanning alert tools)
- GACDW, CMDB, GAPdB, Siebel and BRAVO (asset database tools)
- TAD4D/TAD4z asset management consoles
- SOCKS Open Client tool and PuTTY VPN
- Comparison and analysis of large volumes of data using advanced spreadsheet analysis (VLookup function and spreadsheet macros)

## **Intern- Software Development Project Lead**

IntraHealth - Chapel Hill, NC

January 2015 to May 2015

Led project to develop web mapping application that tracked attacks on healthcare workers around the world. Performed database design, implementation and software development using open source GIS tools (OpenGeo Suite with QGIS and GeoServer, and PostgreSQL database). Oversaw database migration from Windows to Linux server environment.

Skills and technologies used for this position include:

- Project Management
- Platform Migration (Windows to Linux)
- Database Management( PostgreSQL server)
- Open Source GIS analysis and applications deployment(QGIS, GeoServer, AJAX)

## **Research Analyst**

Lee County EDC

July 2012 to March 2013

Researched and managed economic development data using EDIS and TAcquire.

Cultivated data layers for economic development GIS database. Worked with clients to obtain economic development grants. Developed structural reorganization plan for the organization. Created drafts for development grant proposals.

## **Intern - IT Services/GIS**

IT Services Department - High Point, NC

May 2011 to August 2011

Developed ROI analysis for million dollar IT investment (Citrix virtual systems).

Conducted cost-savings and performance-benefit evaluation.

## **Intern- Systems Projects**

City of High Point - High Point, NC

June 2010 to August 2010

Conducted needs assessments and created RFP documents for document imaging investment. Researched federal grants and alternative funding sources for systems project proposals.

## **Independent Contractor**

Self-Employed

February 2005 to January 2010

Worked in various capacities from IT to construction. Worked directly with customers to fix various IT issues including OS and software installation and network/router setup and configuration.

## **Campaign Coordinator**

United Way of Lee County - Sanford, NC

June 2004 to January 2005

Coordinated fundraising activities, media relations, public speaking engagements, and events planning. Gave fundraising speeches before large corporate and public donors.

## **Independent Contractor**

Self-Employed

May 2001 to May 2004

Worked in various capacities from IT to construction. Worked directly with customers to fix various IT issues including OS and software installation and network/router setup and configuration.

## **Hardware Test Technician**

IBM - Durham, NC

July 1998 to April 2001

Tested networking hardware using scopes and power surge simulation devices.

Conducted routine computer maintenance and repair and installed/updated OS and applications at user level. Transferred data using FTP and TCP/IP protocols. Tested

network management software over various OS flavors (Windows, Unix, AIX, Linux), uploaded new builds, patches, and fixes to Tivoli GEM (Global Enterprise Management) product. Tested Websphere transaction security application and certificates against similar products for compatibility. Uploaded new builds, patches, and fixes. Maintained test records for testing work plan. Coordinated with international customers on compatibility and compliance issues.

## **SGT**

NC National Guard

August 1991 to July 1997

13 B- Field Artillery Specialist.

71 L-Administrative Specialist.

Public Affairs NCO (Troop Command), personnel management, photographer.

## Education

---

### **Master's in Geospatial Information Science & Technology**

NC State University-Raleigh - Raleigh, NC

August 2012 to May 2015

### **Master's in Public Affairs**

UNC-Greensboro - Greensboro, NC

August 2009 to May 2012

### **Certificate in Paralegal**

Central Carolina Community College - Sanford, NC

August 2007 to May 2009

### **Bachelor's in Political Science**

UNC-Chapel Hill - Chapel Hill, NC

January 1993 to May 1997

## Skills

---

- DATABASE (5 years)
- TESTING (10+ years)
- UNIX (4 years)
- GIS (7 years)
- PYTHON (7 years)
- Javascript (6 years)
- Web Development (6 years)
- HTML 5 (3 years)
- Git (7 years)
- APIs
- SQL

- Agile
- MySQL
- XML
- Bootstrap
- Microsoft SQL Server
- PostGIS (3 years)
- PostgreSQL (4 years)
- React (2 years)
- .NET (3 years)
- C# (3 years)

## Military Service

---

### **Branch: Army National Guard**

Service Country: United States

Rank: Sergeant

August 1991 to July 1997

13 B- Field Artillery Specialist.

71 L-Administrative Specialist.

Public Affairs NCO (Troop Command), personnel management, photographer.

## Awards

---

### **FEMA Certificate of Achievement**

April 2022

Awarded for outstanding support during the agency's nationwide response to COVID-19 during 2020-2021 as part of the Continuous Improvement Program (CIP).

## Certifications and Licenses

---

### **GISP**

January 2021 to January 2023

Requires and extensive portfolio that combines education, work experience, and practical knowledge. Portfolio is peer reviewed and approved. Must pass a 4 hour examination to be certified. Must complete CE and relevant work experience to renew.

### **Certified Floodplain Manager (CFM)**

December 2020 to January 2024

Recently renewed. Must pass a 4 hour examination for certification. Must maintain 16 CE hours to renew.

## Additional Information

---

### Technical Summary:

Programming Language JavaScript, Python, Ruby, some C# and PHP

### Web Technology

HTML/HTML5, CSS/CSS3/SASS, JavaScript, JQuery, Bootstrap, AJAX, JSON/GeoJSON, NodeJS, Express, with limited knowledge of AngularJS and ReactJS

Database PostgreSQL, some MySQL & MongoDB and RonR dB

IDE Atom, Cloud9, PythonWin, Visual Studio/Code

Version Control & Testing Tools Git/GitHub, Tortoise HG/Mercurial, RhodeCode, NightwatchJS, MochaJS

Web/Application Servers Apache, Express, Python HTTP server

Project Management Tools JIRA, Confluence

UI/UX Design Tools GIMP, InfraView, some Photoshop/Illustrator

### GIS Technologies

ESRI(ArcMap, ArcServer, ArcViewer, ArcScene, Web AppBuilder, ArcCollector, ArcGIS online, ArcGIS API's), OpenSource( QGIS, Grass, GeoServer, GeoExplorer), ERDAS/Hexagon( Imagine, eXploit/M.App X), Google(Map, Earth, API's), MapBox, Leaflet, OpenLayers