

# Bradley A. Andrick

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## Professional Experience:

**Senior IT Programmer Analyst (SWE)**– Mecklenburg County, NC (Charlotte)..... April 2021 – Present

- System design and development of applications for internal and external stakeholders – owned project lifecycle
- Migration of existing systems to modern architecture and re-engineering of existing legacy codebase

**Lead Software Engineer** – Theorem Geo Inc. .... July 2019 – April 2021

- Product owner for building a spatial video application system and lead product roadmap and development effort
- Coordinated and lead development, enhancement and ongoing maintenance of software products
- Architected and executed migration from AWS to Google Cloud Platform of application infrastructure
- Designed applied machine learning applications to productize asset extraction and computer vision technologies

**Programmer/Technology Solutions Administrator** – ArborMetrics Solutions ..... August 2016 – July 2019

- Software Developer: responsible for web and mobile platforms as well as backend architecture and design
- Developed software in .NET(C#), JavaScript, Python, SQL and the ESRI suite of GIS dev tools
- Business development support; on site customer visits, conferences, and consultations
- Project Management in support of AMS Technology Solutions development

**GIS Coordinator** – James Madison University (Facilities Engineering Dept.) ..... June 2015 – August 2016

- Oversaw the University's Facilities Engineering Geographic Information System (GIS)
- Maintained, updated, and expanded the GIS capabilities of the department – planned an enterprise migration
- Researched and developed custom GIS applications, automation scripts, and mapping plugins-ins

**GIS Developer** – James Madison University ..... May 2016 – August 2016

- Application design and development creating a responsive web app for visualizing History Department research
- Virginia Foundation for the Humanities – Grant supported, as Co-Principal Investigator

**GIS Technician** – James Madison University (Facilities Engineering Dept.) ..... May 2014 – June 2015

- Managed and expanded GIS resources to facilitate geospatial analysis in support of engineering projects
- Collected and updated existing data using advanced survey grade GPS units (TSC3 and R10)

**Teaching Assistant** – James Madison University ..... Aug 2013 – May 2014

- Integrated Science and Technology/Geographic Science Department
- Assisted Professors with grading, lectures, and testing

**Engineering and Planning Intern** – Shentel (Telecommunications) ..... May 2013 – May 2014

- Participated in the transfer of data from AutoCAD into a telecommunications GIS (M4)
- Helped to import and export outside and inside plant equipment data using FME Universal Translator

**Buildings and Grounds Assistant** – Shentel (Telecommunications) ..... June 2009 – Aug 2012

- Responsible for conducting maintenance at properties throughout tri-state company service area
- Completed work orders while operating company vehicles and maintenance machinery

## Education:

University of Wisconsin - Madison – Madison, WI ..... May 2019

- **M.S. Cartography and GIS Development** | GPA: 4.0
- Concentration: GIS Development and Programming

James Madison University – Harrisonburg, VA ..... May 2014

- **B.S. Geographic Science** | Minor, Environmental Science | Major GPA: 3.7, Overall GPA: 3.5
- Concentration: Environmental Conservation, Sustainability and Development

## Conference Presentations:

### "Using the ArcGIS JavaScript API in a Hybrid Geospatial Architecture"

Esri Developer Summit, Palm Springs CA (Virtual), 2021

#### Presentation note:

**Bradley Andrick's** presentation highlights the power of the ArcGIS API 4.x for JavaScript with GeoJSON data using the GeoJSONLayer class to satisfy a hybrid geospatial architecture requirement.

### "Using Spatial History to Challenge the Exclusive Past"

National Council for Public History Conference, Baltimore MD, 2016

#### Presentation note:

**Dr. Kevin L. Borg** (Associate Professor, History) and **Bradley A. Andrick** (GIS Coordinator, Facilities Management) presented at the National Council for Public History conference. **Borg** and **Andrick's** project shows how spatial analysis can be within the reach of local historical societies and community groups.

### "Designing a GIS for Campus: Planning, Development, and Maintenance"

Virginia Chapter of the Association of Physical Plant Administrators (VAPPA) Conference, Harrisonburg VA, 2016

#### Presentation note:

**Brad Andrick**, JMU & **Dale Abbott**, VHB – Discusses how JMU's Facilities Management Geographic Information System has progressed. Specifically; how it was started, where it currently stands, and where it is going. Additional topics will also include general GIS planning from a contractor perspective.

### "Leveraging ArcGIS Online: Cloud Mapping and Mobile Phone Data Collection"

Regional GIS User Group Meeting, Harrisonburg VA, 2015

#### Presentation note:

**Bradley Andrick** presents on the use of mobile phone GPS data collection capabilities and current technology. Topics include history of mobile devices and GPS, cloud GIS software comparisons and how to leverage these technologies along with existing GIS infrastructure to lower costs and increase mapping capabilities.

## Technical Skills:

### Geoprocessing and Spatial Analysis

Geodatabase Management  
Enterprise GIS Design  
Web Application Development  
Scripting – ArcPy, JS, SQL  
ArcGIS UI Customization  
Model Builder  
GPS/Survey Data Collection  
Image Analysis  
Cartographic Design  
Spatial and Statistical Analysis  
Coordinate Systems and Projections

### Software and Development

ArcGIS – up to latest 10.x  
(ArcMap, ArcCatalog, ArcGIS Online, Model Builder,  
ArcGIS Pro, ArcGIS for Server)  
AutoCAD – Civil3D  
Trimble Access/ TerraSync  
Trimble Business Center/Pathfinder Office  
Mapcom Systems M4  
GoogleEarth/Maps Engine  
Boundless and QGIS  
Mapbox Studio and TileMill  
CartoDB + CartoDB.js

### Software (Cont.)

Python Scripting, GDAL/OGR, ArcPy  
JavaScript, node.js, HTML, CSS, React  
C# & .NET Frameworks, Java, Xamarin  
MS SQL Server/PostGRES-PostGIS/General DBMS  
GitHub/GitLab/Versioning  
Leaflet.js, Googlemaps API  
Openlayers API, Esri JavaScript API  
FME Universal Translator  
Adobe Illustrator/InDesign  
Survey Grade Trimble GPS Units (Juno, Geo XT,  
GeoExplorer 5, TSC2, TSC3, R8, R10)

## Community Service & Honors:

- GIS Consulting – pro bono, Asheville Greenworks, Asheville NC, 2019
- Volunteer, Energy Savers Network, Asheville NC, 2018
- GIS Consulting – pro bono, Friends of Connect Buncombe, Asheville NC, 2017
- Trail Maintenance Volunteer, JMU Geography Club, Harrisonburg VA, 2013
- Phi Kappa Phi, (Graduate Level Academic Honor Society) joined 2018
- Gamma Theta Epsilon, (Geography Honor Society) joined 2012
- Phi Theta Kappa Honor Society, (Associate Level Academic Honor Society) joined 2010