

# Randy Howard Smith, Jr.

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## Personal Statement

I am a Senior Fellow at the D.C. Policy Center and Geographic Information Systems (GIS) Specialist at Hood College. My goal is to progress my career as a geospatial researcher, analyst, and writer, specializing in topics that include socioeconomics, environmental analysis, and public policy. I am also interested in pursuing my own research interests, which include the analysis of predictive policing strategies and the digital mapping and preservation of historic sites.

## Education

**MSc with Merit, Geospatial and Mapping Science** December 2013  
University of Glasgow, Glasgow, UK  
Master's Thesis: The applications of terrestrial laser scanning and open source software in digital conservation

**BA, Environmental Science** May 2010  
Hood College, Frederick, MD

## Employment History

**Senior Fellow** January 2017 – Present  
D.C. Policy Center, Washington, D.C.

Research and write on topics including crime, demographics, education, workforce development, infrastructure and transportation, social policies, and housing. Create interactive maps, graphics, and visualizations to support analysis and research.

**Geographic Information Systems (GIS) Specialist** August 2015 – Present  
Hood College, Frederick, MD

Taught ENSP 103 Introduction to GIS; Guest Lectured for courses including CS 544 Knowledge Representation & Reasoning, FYS 101 First-Year Seminar, and HIST 366 Ancient Rome; Developed and instructed workshops for Faculty and Students, including an Introduction to GIS, Visualizing Data, and Remote Sensing and Image Classification; Developed Campus and Utilities GIS; Committee member for the Market Research and Admissions Group; Collaborated with Faculty and Administration to develop and enhance research through the use of GIS; Provided geospatial and cartographic support for ongoing GIS projects, including bathymetric surveying, remote sensing, and habitat and stream health; Provided support and instruction for field data collection, preparation, and management for various departments.

**Geospatial Technical Writer**  
Synthesys, Inc. Mclean, VA

February 2014-November 2014

Oversaw and developed geospatial focused Federal grant proposals; Established, gathered, analyzed, and composed research objectives, methodology, and technical information; Translated technical information into clear, readable documents to be used by technical and nontechnical personnel; Provided geospatial and cartographic support for ongoing GIS projects; Researched and collected field data, prepared metadata, and organized data for display on cartographic maps and analysis in a GIS platform.

**Event Coordinator**  
RaceDC Timing, Falls Church, VA

October 2013 - Present

Managed online registration setup and distribution of race-day material to participants for regional and national events; Supervised racecourse management, including the timely and accurate setup of race-day structures and timing devices, volunteer coordination, and onsite operation of computer race timing; Assessed the accuracy of database mergers to ensure participants were given their race times after crossing the finish line.

## **Projects**

### **D.C. Risk Terrain Modeling**

March 2017 – April 2017

D.C. Policy Center, Washington, D.C.

Project includes: Modeling and identification of risk base on aggravating and mitigating factors of various criminal acts throughout Washington, D.C.

### **Food Desert Analysis**

January 2017 – February 2017

D.C. Policy Center, Washington, D.C.

Project includes: Identification of Food Deserts in Washington, D.C. based on walkshed and sociodemographic analysis.

### **Potomac River Algal Bloom Monitoring**

May 2016 – Present

Hood College, Frederick, MD

Project includes: Identification of Algal Blooms, remote sensing detection of various algal species, and land use and land cover classification.

### **Lake Linganore Quality Monitoring**

December 2015 – Present

Hood College, Frederick, MD

Project includes: Water quality analysis and surface interpolation and watershed delineation.

### **Fishing Creek Reservoir Bathymetry**

August 2015 – February 2016

Hood College, Frederick, MD

Project included: Hydrographic survey of fishing creek reservoir using Autonomous Surface Vehicle (ASV), bathymetric surface creation, sedimentation analysis, and dredging analysis and water capacity recovery exploration.

## **Hopetoun House Terrestrial Laser Scan and Digitization**

June 2013-August 2013

University of Glasgow, Glasgow, United Kingdom

Project included: Comprehensive terrestrial laser scans of the Bruce Gates, georeferencing, digitization of structures, and geo-registration, three-dimensional model creation and topographic mapping, and data submission to Historic Scotland for digital cataloguing.

## **Related Skills**

- GIS and surveying software: ArcGIS Suite, QGIS, AutoCAD, PDS2000, N4ce, Star\*Net, Leica GeoOffice, Leica Cyclone, CloudCompare, SocetSet, ERDAS Imagine, Google Earth, OpenStreetMap
- Geospatial predictive policing strategies, aerial imagery digitization, and polygon production
- Risk terrain modeling, geospatial data conversion, geospatial data input and editing, digitization, geo-referencing, geostatistical and spatial analysis, GPS processing
- Hydrographic and land survey principles and practice, including experience with Leica Geosystems and Trimble surveying equipment
- Scientific research methods, quantitative analysis, and comprehensive scholarly writing for federal grant proposals
- Microsoft Office Suite, Microsoft Dynamics GP, Salesforce, Photoshop CS, WordPress
- Computer Languages: R, HTML/CSS, D3js, Python

## **Honors and Awards**

- University of Glasgow, MSc Merit Award, 2013
- University of Glasgow Country Scholarship, 2012
- iCore Networks, Employee of the Month, December 2011
- Hood College Academic Scholarship, 2008-2010
- Monroe Community College Academic Scholarship, 2006-2008

## **Additional Interests**

- Competitive Runner: Member of the Garscube Harriers and Montgomery County Road Runners Club