

SARAH K. HANK

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SKILLS

Data Analysis and Geographic Information Systems (GIS)

- Advanced skills in **ArcGIS** including **Model Builder**; experienced in **QuantumGIS (QGIS)**.
- Advanced skills in Excel; experienced in SPSS and **R statistical software**; beginner skills in **Python**.
- Five years of work experience in the field of GIS.
- Completed coursework using advanced methods of data analysis including geospatial statistics, machine learning (Random Forest, SVM), network analysis, and spatial interaction models (log-linear statistical, gravity model).

Visualization and Web Development

- Intermediate skills in **HTML, CSS, and Carto**, beginner skills in **JavaScript** and **JQuery**.
- Experienced with **HighCharts API, MapBox API, Google Maps API, Inkscape, and TileMill**.
- Strong eye for cartographic design; make use of resources such as ColorBrewer and Paletton.

EDUCATION

University College London Centre for Advanced Spatial Analysis – *London, UK* September 2016

Degree: MSc Smart Cities and Urban Analytics

Coursework: Spatio-Temporal Data Mining, Spatial Data Capture, Storage, and Analysis, Urban Simulation, Smart Cities: Context, Policy & Government, GIS, Quantitative Methods, Urban Systems Theory

Grade: 2:1

The George Washington University – *Washington, DC*

May 2009

Degree: Bachelor of Arts in Geography and International Affairs with conc. in Middle Eastern Studies

Minor: Geographic Information Systems (GIS)

GPA: 3.68/4.0 – Magna Cum Laude

PROFESSIONAL EXPERIENCE

IHS Markit - *Washington, DC and London, UK*

January 2014 - Present

Senior Research Analyst I (GIS) – Refined Products Group

- Assist analysts from a diverse range of groups at IHS with mapping and research needs, including significant work on assessment of extent of **ISIS control over Iraqi and Syrian oil** field production in fall of 2014.
- Used spatial analysis techniques to assist major midstream company in assessing the competitive landscape in the Alberta Oil Sands, measuring access of pipeline on-loading points to upstream assets.
- Use ArcGIS, QGIS, Google Earth, Excel, and Inkscape software to process data and create high quality visualizations for consulting projects, memos, and multiple subscription services.

PFC Energy (acquired by IHS) - *Washington, DC*

February 2012 – December 2013

GIS and Research Analyst II – Downstream Group

- Co-created a new subscription service with projected sales over \$100K; built complex interactive maps and charts visualizing extensive datasets regarding the Midstream Liquids sector.
- Efficiently produced maps for internal use and client projects on a broad range of energy-related topics including asset developments, market analysis, and political conflict.
- Supported analysts with research and analysis, managed several databases and data subscriptions.

Development Seed – *Washington, DC*

May – November 2011

Mapping and Data Intern – Data Team

- Began work with Development Seed in Cairo where I used language skills and local knowledge to research availability of detailed administrative boundary shapefiles for an upcoming project.
- Processed and refined large data sets using Postgres, Open Office, Excel and Google Refine; edited shapefiles using Quantum GIS; styled interactive maps using TileMill; created dynamic Google image charts and graphs.
- Gained basic knowledge of CSS and HTML, gained experience working with a large Postgres/PostGIS database, enhanced my existing GIS skills by working through challenges of client projects.

OTHER EXPERIENCE

Pakathon – *Boston, Massachusetts*

September 13 – 15 2013

Designer – Data Visualization and Web Development

- Managed a group of four participants in developing a website featuring an [interactive map](#) of sectarian target killings in Pakistan during a weekend-long hackathon-style event.

HarassMap.org – *Cairo, Egypt*

April – May 2011

Volunteer

- Assisted in brainstorming new initiatives for an NGO working toward greater public awareness of harassment.
- Authored first draft of justification section for a research proposal regarding the validity of crowdsourcing as a method of data collection.
- Gave introductory GIS tutorial to staff so they might expand their use of GIS beyond Ushahidi platform.

AYUSA Global Youth Exchange – *Washington, DC*

June, August; 2009 - 2011

Cross Cultural Facilitator, Arrival and Departure Orientations

- Supervised a group of 14 female students from predominantly Muslim countries from the State Department's Youth Exchange and Study (YES) Program through a week of sight-seeing in Washington DC in June.
- Led multiple small logistical and cultural orientations for arrival students, provided cultural guidance.
- Gained group management skills and enhanced interpersonal and cross-cultural communication skills.

The George Washington University Language Center – *Washington, DC*

September 2008 – May 2009

Arabic Tutor and Media Room Assistant

- Tutored Arabic Language students of various skill levels on a walk-in basis.
- Independently created instructional and Arabic language materials for Language Lab and classes.

PUBLICATIONS

Activity-Based Intelligence: Principles and Applications – Artech House Publishing

Published December 2015

Graphics and Written Content Contributor

- Contributed written analysis of crime patterns in Washington, DC for the "ABI in Policing" chapter of an Activity-Based Intelligence textbook intended for use by the US Government.
- Created 4 custom maps to illustrate change in crime rate over time by census tracts in Washington, DC as well hotspot analysis of reported crime in Ward 3.