

Andrew J. Vinson

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WORK EXPERIENCE:

Senior Data Analyst, NYU Langone Health, Department of Emergency Medicine - New York, NY - *February 2016 to Present*

- Lead Data Analyst for several epidemiological research projects involving diabetes, rural health, obesity, and disaster medicine
- Transforms real-world population health and emergency medicine data into insights using statistical methods and compelling data visualizations using Python, R, SQL, SAS, Stata, and Tableau
- Manages research project databases to address cyclical and ad hoc reporting needs
- Works with a doctors, epidemiologists, and professors to define and clarify analytic requirements, develop analysis plans, ensure data quality standards, and create publication-ready methods and results

GIS Technician, City of Norfolk, Norfolk, Virginia- *December 2013 – February 2016*

- Provided data analysis for urban planning, engineering, and consulting projects using Computer Assisted Mass Appraisal (CAMA) real estate data
- Improved the integration of CAMA SQL data and GIS through the creation of custom tools using Python to automate and streamline data analysis of real estate sales as well as the creation of maps, infographics, and reports

Graduate Research Assistant, University of Alabama, Tuscaloosa, Alabama - *August 2010 - August 2013*

- Collaborated with several Alabama Regional Planning Commissions perform on quality control, data cleaning, and data management for the GPS collection of municipal utility data for rural Alabama
- Performed ad hoc data analysis and visualization for university professors, staff, and community stakeholders

TECHNICAL SKILLS:

Languages: Python, R, JavaScript, SQL, SAS, Stata, Regex

Data and Analytics Tools: MS SQL Server, MySQL, PostgreSQL, SPSS, Tableau, ArcGIS, QGIS, PostGIS, Illustrator

SELECTED PROJECTS:

Geography of ED Use and Population Health

- Developed tools in using the Pandas, Geopandas, Regex, and Fuzzywuzzy Python libraries to automate the cleaning and mapping in over 130 million patient addresses from New York's Statewide Planning and Research Cooperative System (SPARCS) database for the years 2008 through 2016. Reduce the processing time by 75%
- Leveraged data from 50 million ER visits to develop clustering and hot spot analyses to enable target response to chronic diseases in communities in NYC and rural Upstate NY
- Managed and distributed insurance claims data tables of diagnosis codes, patient demographics, and geographic data using SQL
- Conduct spatial empirical Bayesian smoothing of prevalence data using pysal Python Library and modeling the determinants of chronic diseases using the Stata and spdep library in R

Community Determinants in Diabetes and Obesity

- Performs modeling (logistic, mixed effects, spatial lag, & geographically weighted regression) on ten years individual level BRFSS CDC data to analyze the ecological determinants of diabetes using the lme4, spdep, gwr libraries in R
- Creates interactive dashboards in Tableau and R Shiny for reporting for statistical results and data visualizations

SELECTED PUBLICATIONS:

- Identifying Geographic Disparities in Diabetes Prevalence Among Adults and Children Using Emergency Claims Data, *Journal of the Endocrine Society*, April 2018
- Assessing the Reliability of Performing Citywide Chronic Disease Surveillance Using Emergency Department Data from Sentinel Hospitals, *Population Health Management*, March 2017
- Using Geospatial Analysis and Emergency Claims Data to Improve Minority Health Surveillance, *J. Racial and Ethnic Health Disparities*, August 2017

EDUCATION:

Master of Science in Geography, University of Alabama, Tuscaloosa, Alabama-*August 2013*

Bachelor of Arts in Geography, University of Tennessee-Knoxville, Knoxville, Tennessee - *May 2010*

HONORS:

- Speaker, URISA/IAAO's 2015 CAMA/GIS Technologies Conference in Oklahoma, City, OK
- Chairman's Award for Contributions to Research and Public Service, Geography Department, University of Alabama, 2012
- 2nd Place Team (SEDAAG), World Geography Bee, 2012 Association of American Geographers Conference
- Eagle Scout, Boy Scouts of America, 2006