

# Nicholas Grokhowsky, M.S.

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## EDUCATION

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<b>Doctor of Philosophy in Geospatial Analytics</b> <i>North Carolina State University, Raleigh, North Carolina</i>	Expected 2023-24
<b>Graduate Certificate in Computer Programming</b> <i>Harvard University, Cambridge, Massachusetts</i>	January 2019
<b>Master of Science in Geomatic Sciences</b> <i>University of Florida, Gainesville, Florida</i>	December 2018
<b>Graduate Certificate in Geospatial Analysis</b> <i>University of Florida, Gainesville, Florida</i>	June 2018
<b>Bachelor of Art in Interdisciplinary Social Sciences</b> <i>Florida Atlantic University, Boca Raton, Florida</i>	December 2005

## RESEARCH INTERESTS

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To create a positive impact on decision making for an organization using my experience with software engineering, data science, and business leadership.

## RESEARCH EXPERIENCE

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**ORISE Fellow** November 2020 - April 2023  
*U.S. Environmental Protection Agency*  
Durham, North Carolina

- Conducted independent research in response to EPA's priorities for chemical contaminants. Research involved natural language processing (NLP) and inferential analysis to identify geographical and topical biases in public health research. The purpose of this work was to aid in the research decision making process.
- Contributed to an interdisciplinary team of researchers aimed at uncovering environmental effects that increase or decrease chemical contamination. The contaminants of interest included lead (Pb) and perfluoroalkyl substances (PFAS) in multiple regions throughout the United States. Both statistical and machine learning methods were used for this analysis. Data sources included satellite imagery, sociodemographic, economic, and anonymized health data. The results of these projects have led to multiple scientific research publications.
- Perform quality assurance and quality protocol (QAQP) development, documentation, and improvements to maintain scientific credibility and to conduct impactful scientific research. QAQP is implemented through note taking, repetition, and rigorous communication.

**Data Manager** July 2019 - November 2020  
*U.S. Environmental Protection Agency*  
Durham, North Carolina

- Assisted with a sensitive health study regarding childhood elevated blood lead levels

(EBLL) in Michigan where data processing and storage was necessary. Data quality and data representativeness tests were instrumental in finalizing the analysis and publishing the research.

- Investigated independent research on the topic of perfluoroalkyl substances (PFAS). Data extraction and storage methodology was implemented for a novel analysis to estimate the PFAS levels across the U.S.

## TEACHING AND MENTORING EXPERIENCE

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### Graduate Teaching Assistant

Spring 2022

*North Carolina State University, Center for Geospatial Analytics*  
Raleigh, NC

- Supported professor for graduate level data management class that was specific to geodatabasing. The class focused on ESRI server platform products (PaaS) and SQL databases. Grading work, curating assignments, answering student questions, and guiding students were necessary.

### Student Assistant

March 2018

*ESRI*

Palm Springs, CA

- Acted as a liaison between ESRI's clientele and the software engineering and data science teams. This was achieved through assisting in front-end service and aiding the ESRI presentations. The opportunity provided networking opportunities with thousands of data scientists, software engineers, and GIS specialists.

## HONORS AND AWARDS

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### Eagle Scout

Fall 1998

*Boy Scouts of America*

- Taught hundreds of young men invaluable skills in leadership, discipline and outdoor survival by leading service projects, meetings, and outdoor activities.
- Led conservation projects including mangrove nursery restoration, reforestation local parks, and cleaning local waterways.
- Contributed thousands of hours to charitable events including fundraising and donation events, such as car washes, door to door food drives, and mentorship programs.

## PUBLICATIONS AND POSTERS

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Grokhowsky, Nicholas. An inferential spatiotemporal approach for knowledge synthesis to identify trends in public health research. *Heliyon*. (Currently in review) 2023

Grokhowsky, Nicholas. Reducing knowledge synthesis workload time using a text-mining algorithm for research location and subtopic extraction from geographically dependent research publications. *BMC Systematic Review* (Currently in review) 2023.

Grokhowsky, Nicholas. Estimating research beneficiaries to reduce bias in public health research using direct and indirect production efficiencies. *Humanities & Social Sciences* (Currently in review) 2023

Xue J, Zartarian V, Tornero-Velez R, Stanek LW, Poulakos A, Walts A, Triantafillou K, Suero M, Grokhowsky N. A Generalizable Evaluated Approach, Applying Advanced Geospatial Statistical Methods, to Identify High Lead Exposure Locations at Census Tract Scale: Michigan Case Study. *Environ Health Perspect*. 2022 Jul;130(7):77004. doi: 10.1289/EHP9705. Epub 2022 Jul 27. PMID: 35894594; PMCID: PMC9327739.

Grokhowsky, Nicholas. 2022. Identifying bias in childhood blood lead research using natural language processing. [Poster]. CURISA: NC GIS Conference Poster Session. 2021.

DeLuca N, Mullikin A, Slover R, Thomas K, George B, Stanek L, Grokhowsky N, Hubal E. Geographic and Demographic

Variability in Serum PFAS Concentrations for Pregnant U.S. Women. Environ Health Perspect. [Conference presentation abstract]. 2021;1

## PROFESSIONAL EXPERIENCE

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### **Catastrophic Risk Analyst**

April 2023 - Present

*IAT Insurance Group*

Raleigh, NC

- Assess financial risk of catastrophic events throughout the U.S. using data analytics and catastrophic risk modeling tools.
- Architect and engineer software applications that improve productivity for the catastrophic risk management team, underwriting departments, and claims department.

### **Strategic Account Specialist**

May 2017 - July 2020

*American Insurance Advisers*

Boca Raton, FL

- Increased client base by ~50% through researching and soliciting industries not traditionally sought after by the firm
- Premiums generated by the new industries translated to a 25% increase in firm's revenue

### **Managing Director**

February 2012 - May 2017

*American Insurance Advisers*

Boca Raton, FL

- Developed management systems to reduce expenses by ~20% and create more efficient service and sales.
- Coached teams of up to 8 employees in sales, service, and marketing systems.

### **Insurance Producer**

Sept. 2008 - February 2012

*American Insurance Advisers*

Boca Raton, FL

- Generated \$500,000 in sales of high net worth clientele within the first year of this position.
- Networked with local businesses from dozens of industries to understand business insurance needs and target specific business clientele.

## TECHNICAL SKILLS

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**Programming languages:** Java, Python, C++, R, SAS, JavaScript, C#

**Software engineering concepts:** Object-Oriented Design, data structures, computer-based models, simulations, front-end design, and back-end design

**Visualization tools:** Photoshop, InkScape, Blender, Kepler, Tableau, Leaflet, RawGraphs, Leaflet, HTML, & CSS

**GIS:** ArcGIS and ArcPro, GrassGIS, QGIS, GeoPandas, Rasterio, Shapley, RGDAL

**Other:** Windows OS, Linux OS, Mac OS, CAD, Certified Scrum Master (CSM), Property & Casualty (2-20), Life, Health & Variable Annuities (2-15)

## SOFT SKILLS

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- High attention to detail while performing professional work duties.
- Leadership mentality with emphasis on problem solving.

- Strong and clear oral communication among individuals and groups.
- Honest and loyal individual with high regard for moral duty.

## REFERENCES

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### **Lindsay Stanek, Branch Chief**

*U.S. Environmental Protection Agency, Center for Public Health and Environment*  
(919) 541-7792, [stanek.lindsay@epa.gov](mailto:stanek.lindsay@epa.gov)

### **Rogelio (Mike) Tornero-Velez, Physical Scientist**

*U.S. Environmental Protection Agency, Center for Public Health and Environment*  
(919) 541-9447, [tornero-velez.rogelio@epa.gov](mailto:tornero-velez.rogelio@epa.gov)

### **Hartwig (Henry) Hochmair, Associate Professor of Geomatics**

*University of Florida*  
(954) 577-6317, [hhhochmair@ufl.edu](mailto:hhochmair@ufl.edu)

### **Adam Benjamin, Affiliated Geospatial Researcher**

*University of Florida*  
(401) 741-7801, [adam.benjamin@gmail.com](mailto:adam.benjamin@gmail.com)