

Alexander C. Michels

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EDUCATION

Ph.D. in Informatics

University of Illinois Urbana-Champaign

Jun 2019-May 2025 (*expected*)

M.S. in Geography

University of Illinois Urbana-Champaign

Aug 2022-May 2024

B.S. in Mathematics and Financial Economics

Westminster College

Aug 2015-May 2019

EXPERIENCE

CyberGIS and CyberInfrastructure Researcher

Champaign, IL

CyberGIS Center & Geospatial Information Laboratory (CIGI)

Jun 2019-Present

- Lead developer on CyberGIS-Compute (75 users; Typescript, Python, SLURM, Globus) and CyberGIS-Jupyter (1368 users; Docker, Docker Swarm, Linux, Bash, Ansible, Kubernetes).
- Managed 6 student research programmers; interviewed and hired students and full-time staff.
- Led workshops with 50+ participants and organized conference symposiums/sessions.
- Analyzed spatial Big Data using Bash, HPC, Python, Machine Learning (ML), and SQL.
- Published 16 articles and presented at 20+ conferences, garnering 200+ citations.

Systems Administrator and Software Engineer

New Wilmington, PA

Titan Radio and WCN 24/7

May 2018-May 2019

- Deployed Linux servers and VirtualBox VMs running software for news and radio staff.
- Installed servers, upgraded operating systems, managed software, and automated workflows.

Information Technology Intern

New Castle, PA

Treloar & Heisel

Sept 2018-Dec 2018

- Cleaned and upgraded database for sales and wrote apps in Java, Python, and Visual Basic.

Data Scientist

Los Angeles, CA

Praedicat, Inc. & Institute for Pure and Applied Mathematics at UCLA

Jun 2018-Aug 2018

- Built toolkit to crawl and parse millions of webpages for insurtech business insights.

AWARDS

- 2024 First Place, Data Visualization Competition, Data Science for Everyone Workshop, Practice and Experience in Advanced Research Computing (PEARC) 2024
- 2024 SDOH & Place Fellowship, Healthy Regions & Policies Lab
- 2023 PI (Co-PI: Dr. Shaowen Wang) (400,000 credits). Advanced Cyberinfrastructure Coordination Ecosystem: Services & Support (ACCESS) Explore Allocation for “SPACTS: a spatial partitioning algorithm for computing travel-time zones at scale” (CIS230031)
- 2022 Graduate Research Fellow, National Socio-Environmental Synthesis Center (SESYNC)
- 2020 Computational Research Techniques Fellow, Texas Advanced Computing Center (TACC)
- 2020 First Place, Robert Raskin Student Paper Competition, Cyberinfrastructure Group, American Association of Geographers (AAG)

SKILLS

Data Science: Big Data, G.I.S., Network Science, Git, ML/AI, Parallel Programming

Languages: Python, Javascript, Typescript, Bash, SQL (Postgres, PostGIS), HTML, C++, Java

Technologies: Ansible, AWS, Docker, Hadoop, Kubernetes, OpenStack, Terraform

Operating Systems: Linux (Debian, Ubuntu, CentOS, Scientific), Windows, Apple