Alexander C. Michels

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EDUCATION

Ph.D. in Informatics **Jun 2019-May 2025 (*expected*)**
University of Illinois Urbana-Champaign

M.S. in Geography **Aug 2022-May 2024**
University of Illinois Urbana-Champaign

B.S. in Mathematics and Financial Economics **Aug 2015-May 2019**
Westminster College

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 20+ 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