

Alexander C. Michels

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🎓 Education

Ph.D. in Spatial Informatics In Progress
University of Illinois at Urbana-Champaign

M.S. in Geography and G.I.S. In Progress
University of Illinois at Urbana-Champaign

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

👛 Experience

CyberGIS and CyberInfrastructure Researcher 📍 Champaign, IL
[CyberGIS Center](#) & [Geospatial Information Laboratory \(CIGI\)](#) *June 2019-Present*

- Lead development of projects including a Hadoop cluster and [CyberGISX/CJW](#).
- Supervised and mentored multiple undergraduate research assistants.
- Worked with tools including Docker, Docker Swarm, Kubernetes, OpenStack, and Terraform.

Data Scientist and Informatics Researcher 📍 Los Angeles, CA
[Institute for Pure and Applied Mathematics at UCLA](#) & [Praedicat, Inc.](#) *June 2018 -August 2018*

- Worked to automating information extraction, classification, and aggregation from web data for business profiling of over 52,600 companies and corporate entities.

Systems Administrator and Software Engineer 📍 New Wilmington, PA
[Titan Radio](#) and [WCN 24/7](#) *May 2018 - May 2019*

- Responsible for the infrastructure required to keep the radio and television station operating.

Information Technology Intern 📍 New Castle, PA
[Treloar & Heisel](#) *September 2018 - December 2018*

- Maintained databases and wrote apps for company use in Java, Python, and Visual Basic.

🔗 Projects

CyberGIS-Jupyter 🌐 <https://cybergisxhub.cigi.illinois.edu/>

- Platform for reproducible science using JupyterHub on DockerSwarm and Kubernetes.
- Redesignated CJW to use Easybuild & Lmod and developed a version using K8s on Openstack.

WhereCOVID-19 🌐 <https://wherecovid19.cigi.illinois.edu/>

- Dashboard for displaying up-to-date COVID-19 statistics.
- Wrote pipeline to calculate access to medical resources. DOI: [10.1186/s12942-020-00229-x](https://doi.org/10.1186/s12942-020-00229-x)

⚙️ Skills

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

🔗 **Languages:** Python, Bash, C++, R, SQL

🔧 **Technologies:** Docker, Hadoop (HDFS/Spark/Yarn), Kubernetes, OpenStack, Terraform

💻 **Operating Systems:** Linux, Windows