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Alexander C. Michels

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*

– Supervised 4 undergraduate research assistants. Conducted hiring searches and interviews.
– Lead developer of projects including a Hadoop cluster and CyberGIS-Jupyter/CJW.
– Worked with Ansible, CVMFS, Docker, Docker Swarm, Kubernetes, OpenStack, and Terraform.

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 *Sept 2018 - Dec 2018*

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

Data Scientist and Informatics Reseacher Los Angeles, CA
Institute for Pure and Applied Mathematics at UCLA & Praedicat, Inc. *June 2018 - Aug 2018*

– Built and deployed toolkit to gain business insights from unstructured web data.

PROJECTS

CyberGIS-Compute **cybergis.github.io/cybergis-compute-python-sdk**

– Service, REST API, and SDK for reproducible, sharable science on HPC resources.
– Lead developer managing multiple students working on the Core and SDK.

CyberGIS-Jupyter **cybergisxhub.cigi.illinois.edu**

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

WhereCOVID-19 **wherecovid19.cigi.illinois.edu**

– Wrote pipeline to calculate access to medical resources. DOI: 10.1186/s12942-020-00229-x

SKILLS

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

Languages: Python, Bash, SQL (Postgres, PostGIS, pgRouting), Javascript, C++, R

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

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