

Alexander C. Michels

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Education

University of Illinois at Urbana-Champaign

Ph.D. in Informatics

– Pursuing the Spatial Informatics concentration under Dr. Shaowen Wang

Champaign, IL

June 2019-Present

Westminster College

Bachelor of Science in Mathematics and Financial Economics

– Honors Thesis: “Capturing the Predictive Power of Cortical Learning Algorithms”

– Minor in Computer Science — Graduated Cum Laude — Honors in Computer Science and Math — 3.7 GPA

New Wilmington, PA

August 2015 - May 2019

Experience

Geographic Information Science Researcher

CyberGIS Center and CyberInfrastructure & Geospatial Information Laboratory (CIGI)

– Conducting spatial informatics research under Dr. Shaowen Wang.

– Primarily working in Algorithms and Systems, building and maintaining the cyberinfrastructure and programming solutions to computational problems.

Champaign, IL

May 2019-Present

Data Scientist and Informatics Reseacher

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

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

– Worked for IPAM to develop a novel algorithm for computational fact-checking on knowledge graphs and a self-supervised machine learning algorithm for sentence importance which outperformed TF-IDF.

Los Angeles, CA

June 2018 -August 2018

Systems Administrator and Software Engineer

Titan Radio and WCN 24/7

– Responsible for the technology required to keep the radio and television station operating.

New Wilmington, PA

May 2018 - May 2019

Information Technology Intern

Treloar & Heisel

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

New Castle, PA

September 2018 - December 2018

Computational Finance Research Assistant

Dr. Charles Shaffer

– Integrated cryptocurrency trading into Dr. Shaffer’s algorithmic currency trading application.

New Wilmington, PA

January 2017 - May 2018

Projects

htm-timeseries

Repo: <https://github.com/alexandermichels/HTMResearch>

– Project developed during my Bachelor’s Honors Thesis focused on Hierarchical Temporal Memory

– Tool for training HTM networks on time series and analyzing the data

pcatxcore

Repo: <https://github.com/alexandermichels/pcatxcore>

– Information extraction and validation tool for Praedicat, Inc., an Insurtech company

– Uses web crawlers, word2vec, and computational fact-checking on knowledge graphs

MintSetup

Repo: <https://github.com/alexandermichels/MintSetup>

– Python application with PyQt5 GUI that produces Bash scripts

– Allows users to produce customized Bash scripts for installing applications and removing pre-installed software

Skills

Data Science: A.I., Big Data, G.I.S., Machine Learning, Parallel Programming, Network Science

Languages: Python (& Cython), Java, C++, Bash, R, HTML, CSS, XML, Javascript, SQL

Operating Systems: Linux (esp. FreeNAS, Gentoo, Mint, Raspbian, & Ubuntu), Windows