Alexander C. Michels

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🎓 Education

University of Illinois at Urbana-Champaign 📍 Champaign, IL
Ph.D. in Informatics *Jue 2019-Present*
– Pursuing the Spatial Informatics concentration under Dr. Shaowen Wang

Westminster College 📍 New Wilmington, PA
Bachelor of Science in Mathematics and Financial Economics *August 2015 - May 2019*
– 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

💼 Experience

Geographic Information Science Researcher 📍 Champaign, IL
CyberGIS Center and CyberInfrastructure & Geospatial Information Laboratory (CIGI) *May 2019-Present*
– 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.

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

Systems Administrator and Software Engineer 📍 New Wilmington, PA
Titan Radio and *WCN 24/7* *May 2018 - May 2019*
– Responsible for the technology 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 applications for company use in Java, Python, and Visual Basic.

Computational Finance Research Assistant 📍 New Wilmington, PA
Dr. Charles Shaffer *January 2017 - May 2018*
– Integrated cryptocurrency trading into Dr. Shaffer's algorithmic currency trading application.

⑂ 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, Informatics, 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