

# Alexander C. Michels

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## 🎓 Education

### Westminster College

*Bachelor of Science in Mathematics and Financial Economics*

📍 New Wilmington, PA

August 2015 - May 2019

- 3.7 GPA; Minor in Computer Science
- Honors Thesis in Hierarchical Temporal Memory focused on A.I. and Time Series Analysis
- **Extra-Curriculars:** Endowment Fund, Honors Program, Financial Analyst Program, Kappa Mu Epsilon, Men's Choir, Omicron Kappa Sigma, Pi Sigma Pi, and Secretary of Robotics Team

## 👛 Experience

### Informatics Researcher

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

📍 Los Angeles, CA

June 2018 - August 2018

### Systems Administrator and Software Engineer

*Titan Radio and WCN 24/7*

📍 New Wilmington, PA

May 2018 - Present

### Teaching Assistant and Tutor

*Westminster College*

📍 New Wilmington, PA

August 2015 - Present

### Data Scientist

*Treloar & Heisel*

📍 New Castle, PA

September 2018 - Present

### Financial Analyst

*Program with Moody's Investors Service VP Ben Nelson*

📍 Various

December 2017 - August 2018

### Computational Finance Research Assistant

*Dr. Charles Shaffer*

📍 New Wilmington, PA

January 2017 - May 2018

## 📖 Research

### Using ARMA Models to Capture the Predictive Power of Cortical Learning Algorithms

*December 2017 - Present*

*advised by Dr. C. David Shaffer and Dr. Carolyn Cuff*

### Computational Fact-Checking through Relational Similarity based Path Mining

*July 2018 - Present*

*with Himanshu Ahuja*

### Minimum Square Deviance k-Chinese Postman Problems

*August 2017 - January 2018*

*advised by Dr. Fontes Merz*

### Algorithmic Game Theory

*January 2017 - May 2017*

*advised by Dr. Carolyn Cuff*

## 👤 Conferences and Talks

### “Capturing the Predictive Power of Cortical Learning Algorithms”

*National Conference on Undergraduate Research*

April 2019

📍 Atlanta, GA

### “Computational Fact-Checking through Knowledge Graphs”

*AMS Contributed Paper Session at 2019 Joint Mathematics Meeting*

January 2019

📍 Baltimore, MD

### “Information Extraction and Aggregation for Business Profiling”

*Invited Talk at Praedicat, Inc.*

August 2018

📍 Los Angeles, CA

### “Information Extraction and Aggregation for Business Profiling”

*Invited Talk at Institute for Pure and Applied Mathematics*

July 2018

📍 Los Angeles, CA

### “Decentralizing the World with Blockchain”

*Undergraduate Research & Arts Celebration*

April 2018

📍 New Wilmington, PA

### “Repeated Play Games”

*MAA, Allegheny Mountain Section Meeting*

April 2017

📍 Pittsburgh, PA

### “Strategies in Simulated Repeated Play Game Theory”

*Undergraduate Research & Arts Celebration*

April 2017

📍 New Wilmington, PA

### “Optimizing Throughput, Cost, and Safety in Toll Booth Plazas”

*Pi Mu Epsilon Regional Conference*


February 2017

📍 Youngstown, OH

## Awards


<b>Best Robot in Division Prize for Senior Unique Division</b>	April 2018
<i>"Robot in the Division with the lowest Total Final Scores"</i>	Trinity Fire Fighting Robot Contest
<b>North America Award for Level 2</b>	April 2018
<i>"The top North American robot in Level 2"</i>	Trinity Fire Fighting Robot Contest
<b>Dr. Thomas R. Nealeigh Mathematics Scholarship</b>	March 2018
<i>"awarded to an outstanding junior or senior mathematics major"</i>	Westminster College
<b>Paul E. Brown Memorial Scholarship</b>	March 2017
<i>"given based on merit and academic achievement"</i>	Westminster College
<b>Honorable Mention</b>	January 2017
<i>"excellent modeling and sensitivity analysis"</i>	COMAP International Mathematical Modeling Competition
<b>Mathematics Book Award</b>	March 2017
<i>"presented to the sophomore Mathematics major with the highest GPA"</i>	Westminster College

## Skills

 **Computer Science:** Parallel Programming, Software Engineering, System Administration

 **Data Science:** A.I., Big Data, Informatics, Machine Learning, Network Science

**\$ Finance and Economics:** Algorithmic Trading, Corporate Credit Analysis, GAAP, Risk Analysis

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

 **Software & Tools:** AWS, Linux, NLTK, Numpy, Pandas, scikit-learn, Selenium