

Michael Dymek

Data Analyst

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Education

M.S. Mathematics

Sep 2021 – Jun 2023

Western Washington University, *Bellingham WA*

B.S. Applied Mathematics and B.S. Physics with Minor in Astronomy

Sep 2017 – Jun 2021

Western Washington University, *Bellingham WA*

Experience

Graduate Teaching Assistant – WWU Math Department

Sep 2021 – Jun 2023

- Taught 30-student introductory math classes. Created and delivered lesson plans that aligned with the course objectives. Courses included algebra, trigonometry, pre-calculus, and business calculus.
- Counseled students one-on-one and in small groups to provide individualized help with course material.
- Graded student's work while providing specific, constructive, and actionable feedback.
- Develop a consistent grading rubric and grading policy.

Lead Physics Tutor – WWU Tutoring Center

Sep 2018 – June 2021

- Tutored hundreds of students during drop-in time, covering a wide variety of topics, including algebra, pre-calculus, calculus, kinematics, dynamics, electromagnetism, optics, fluids, and thermodynamics.
- Prepared and led weekly study groups for 5-10 students to access personalized assistance.
- Created and led weekly review sessions and prepared 15–25 tutors for expected questions and anticipated issues.

Skills

Technical Skills

- | | | |
|--|---------------|----------------|
| • Python (Pandas, NumPy, SciPy, Matplotlib, Jupyter) | • SQL (MySQL) | • C++ |
| • R (Rstudio) | • MATLAB | • LaTeX |
| | • Mathematica | • HTML and CSS |

Personal Proficiencies

- | | | |
|-----------------------|-----------------|-----------------------|
| • Analytical Thinking | • Leadership | • Time Management |
| • Research | • Collaboration | • Attention to Detail |

Projects

Statistics Series Final Project

Answered a variety of questions about how certain variables affected life expectancy using World Health Organization data. Used R to transform variables and calculate regressions, and calculate p-values to determine which variables had statistical relationships. Analyzed the remaining multivariate regression using ANOVA tables .

Mathematical Modeling Project

Modeled the net ecosystem exchange of salt marshes in Massachusetts using West Virginia University and NOAA data. Model was derived using the Buckingham-Pi theorem, with the parameters being calculated using R once the model was derived.

Mathematical Epidemiology Project

Performed multiple regressions on the Omicron wave of COVID hospitalization data using MATLAB. Using the different regressions, we were able to determine which disease model fit best. Models were derived from first principles using compartmental epidemiological analysis.

Computational Physics Final Project

Modeled the interaction of three astronomical bodies using the Euler-Cromer method of solving differential systems. Algorithm programmed with Python in Jupyter Notebook.