MITCHELL MICHAEL

mitchelilmichael33@gmail.com | **Available Upon Request**

PROFESSIONAL SUMMARY

Analytical and detail-oriented **Mathematics Ph.D.** with expertise in **mathematical modeling, data analysis, and algorithmic problem design**. Holds a Doctor of Philosophy (Ph.D.) in Mathematics and a Bachelor of Science in Applied Mathematics from the **University of New Hampshire**. Demonstrated excellence in creating complex, high-quality mathematical problems and solutions for research and computational applications. Adept at applying advanced mathematics to artificial intelligence, data validation, and quantitative modeling projects. Strong written communication, precision in research documentation, and proven ability to contribute to the development of **large language model (LLM) datasets** and **AI innovation**.

KEY SKILLS

Mathematical Expertise: Probability Theory, Linear Algebra, Real & Complex Analysis, Optimization
AI & Computational Modeling: Algorithm Development, Data Structuring, Simulation Design, LLM Problem Crafting
Programming & Tools: Python, R, MATLAB, SQL, LaTeX
Statistical & Analytical Methods: Predictive Modeling, Bayesian Inference, Data Visualization, Quality Assurance
Communication & Collaboration: Academic Writing, Technical Documentation, Research Presentation
Project Leadership: Research Planning, Peer Collaboration, Analytical Accuracy, Process Improvement

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PROFESSIONAL EXPERIENCE

Senior Quantitative Researcher / AI Mathematics Consultant
Remote | 2020 – Present

- Design and evaluate **complex mathematical problem sets** used in AI data generation and model training.
- Apply advanced **statistical modeling and optimization** to improve large-scale data validation processes.

- Develop algorithms that replicate high-level mathematical reasoning for **language model enhancement**.
- Collaborate with data scientists to ensure **accuracy, reproducibility, and linguistic clarity** in model output.
- Publish peer-reviewed research bridging applied mathematics and computational modeling.

Mathematics Research Assistant
University of New Hampshire | 2014 – 2020

- Conducted research in **numerical methods and applied statistics** supporting AI-relevant modeling approaches.
- Created and reviewed problem statements and datasets for experimental validation and testing.
- Authored technical reports and co-presented results at academic conferences.
- Mentored graduate students in computational tools and mathematical formulation.

Data Analyst (Graduate Fellowship)
Mathematics & Statistics Department | 2010 – 2014

- Designed **data-driven experiments** and implemented mathematical validation processes.
- Built simulation models in Python and MATLAB for statistical and computational studies.
- Ensured precision and data consistency through robust analytical QA practices.

Mathematics Tutor
New Hampshire Academic Centers | 2006 – 2010

- Developed problem sets that strengthened analytical and critical reasoning in undergraduate students.
- Guided learners through advanced topics in probability, algebra, and mathematical proofs.
- Focused on clarity, rigor, and precision in mathematical explanation — key traits for AI data design.

EDUCATION

Doctor of Philosophy (Ph.D.) in Mathematics
University of New Hampshire, Durham, NH | 2018

Bachelor of Science (B.S.) in Applied Mathematics
University of New Hampshire, Durham, NH | 2012

CERTIFICATIONS & ADDITIONAL TRAINING

- **Machine Learning for Researchers** – Coursera
- **Advanced Statistical Modeling** – edX
- **Scientific Writing & Research Communication** – University of New Hampshire

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ADDITIONAL INFORMATION

Languages: English (Native)
Work Authorization: U.S. Citizen
Research Focus: Mathematical Modeling, AI Data Structuring, Algorithmic Design, Problem Development
Availability: Remote; Flexible Hours (15–40 hrs/week)
References: Available upon request