ANTONY SIKORSKI

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I am a third year Statistics PhD candidate at the Colorado School of Mines. I primarily study machine learning and statistical methods for working with large spatial and spatio-temporal data sets. I am looking to expand my experience in industry and apply my expertise to meaningful, real-world problems.

EXPERIENCE

AI for Climate Research Fellow – LEAP, Columbia University : May 2024 - August 2024

- Mentored undergraduate researchers while working on a project applying machine learning and equation discovery algorithms to make large climate models more accurate and interpretable.

Machine Learning Intern – NASA Jet Propulsion Laboratory: May 2023 - August 2023

- Worked with a diverse team of system engineers, statisticians, and machine learning experts to build and implement unsupervised anomaly detection systems for multivariate time series (Deep Space Network data).
- Designed custom parsers and automated several previously manual data acquisition pipelines.
- Designed pipelines to query OpenAI LLMs such as GPT4 with API access to rapidly process large amounts of non-confidential information and avoid web version context window limits.

Data Analytics Engineer – Excelitas Technologies Corp, Boulder, CO: February 2022 - March 2023

- Identified critical to quality factors and relationships to aid the process engineering team in implementing statistically-informed improvements to maximize product quality and yield.
- Frequently communicated results to upper management and aided with strategic decision making.

SKILLS

- **Programs/Languages:** R, Python, Git, Julia, SQL, LaTeX, Markdown
- **Notable Packages:** Python: PyTorch, TensorFlow, Keras. R: fields, LatticeKrig, ggplot2, dplyr
- Statistical Modeling, ML, Visualization, Software development (LatticeKrig R package), Version control
- Fluent in both English and Russian.

AWARDS

NSF GRFP: Sept 2024 - Aug 2027

- Awarded the National Science Foundation Graduate Research Fellowship to fund the remaining years of my PhD.

EDUCATION

PhD, MS – Colorado School of Mines: August 2022 - Graduating May 2026

- Third year Statistics PhD candidate in the Department of Applied Mathematics and Statistics.
- Data Science MS with a focus in Machine Learning completed in May 2024.
- Have taught the introductory statistics course, and been a TA for two semesters of differential equations.

BS – University of California, San Diego: September 2018 - December 2021

- Major in Applied Mathematics and a Minor in Physics, graduated early with Provost Honors standing.

SELECT SCIENTIFIC PUBLICATIONS

- "Normalizing Basis Functions: Approximate Stationary Models for Large Spatial Data", **A. Sikorski**, D. McKenzie, D. Nychka, *arXiv : 2405.13821*, (2024), accepted for publication in *Stat* (Sept, 2024).
- "Crystal Growth of Quantum Magnets in the Rare-Earth Pyrosilicate Family R2Si2O7 (R = Yb, Er) Using the Optical Floating Zone Method", H.S. Nair, T. DeLazzer, T. Reeder, **A. Sikorski**, G. Hester and K.A. Ross, *Crystals 2019*, *9*, 196.