

Antony Sikorski

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EDUCATION

Colorado School of Mines

PhD: Statistics

Aug 2022 – May 2026

Golden, CO

Colorado School of Mines

MS: Data Science, Machine Learning

Aug 2022 – May 2024

Golden, CO

University of California, San Diego

BS: Applied Mathematics, Minor in Physics

Sept 2018 – Dec 2021

San Diego, CA

EXPERIENCE

LEAP @ Columbia

AI Research Fellow

May 2024 – Aug 2024

New York, NY

- Applied deep learning and equation discovery to create interpretable parameterizations that improve climate model accuracy.
- Mentored two undergraduate students during their REU, resulting in their first conference presentation.
- Led introductory workshops on data visualization, Jupyter notebooks, deep learning with PyTorch, and version control.

NASA Jet Propulsion Laboratory

Machine Learning Intern

May 2023 – August 2023

Los Angeles, CA

- Developed an unsupervised anomaly detection system using adversarially trained auto-encoders for multivariate time series (Deep Space Network antenna data).
- Designed custom parsers and automated several previously manual data acquisition pipelines, leveraging LLMs to rapidly process the results. Routines that once occupied hours of engineers' time now occur in seconds.

Excelitas Technologies Corp

Data Analytics Engineer

Feb 2022 - Mar 2023

Boulder, CO

- 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 presented results to upper management and aided with strategic decision making.

SKILLS

Programs/Languages: R, Python, SQL, Git, Julia, \LaTeX , Jupyter Notebooks, RMarkdown

Notable Packages: PyTorch, TensorFlow, Keras, Pandas, Scikit-learn, ggplot2, dplyr, doParallel

Software Development: [LatticeKrig R package](#) 80,000+ downloads (new version released), [fields R package](#) 3,500,000+ downloads (currently developing new features, releasing soon)

Core: Statistical Modeling, Deep Learning, AI, LLMs, Data Visualization, Software Development, Version Control

Spoken Language: English (fluent), Russian (fluent), Spanish (beginner)

AWARDS

NSF GRFP Fellow

Sept 2024

- Awarded the [National Science Foundation Graduate Research Fellowship](#) with a total award of \$100,000+, resulting in 3 years of full funding for my PhD research.

SELECT PUBLICATIONS

- "Normalizing Basis Functions: Approximate Stationary Models for Large Spatial Data", **A. Sikorski**, D. McKenzie, D. Nychka, *Stat* (2024).
- R Package LatticeKrig, D. Nychka, D. Hammerling, S. Sain, N. Lenssen, C. Smirniotis, M. Iverson, **A. Sikorski** (2024)
- "Crystal Growth of Quantum Magnets in the Rare-Earth Pyrosilicate Family $\text{R}_2\text{Si}_2\text{O}_7$ (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).