Zhao Nano Lab

UNIVERSITY OF GEORGIA



UNDERGRADUATE RESEARCH OPPORTUNITIES

Data Analysis & AI

Spectroscopy · Machine Learning

Explore scientific data, develop useful AI tools, and contribute to real research projects.

FROM SPECTRAL DATA TO SCIENTIFIC DISCOVERY

FUTURE UNDERGRADUATE PROJECTS

01 Spectral Data Processing

Develop baseline correction, noise removal, peak detection, and spectral quality-control workflows.

02 Machine Learning for Spectra

Explore classification, regression, model evaluation, and interpretable AI for Raman/SERS data.

03 SpectraGuru Development

Contribute to open-source spectral analysis tools, visualization, testing, and user documentation.

04 Spectral Libraries & Benchmarks

Curate spectra and metadata; compare algorithms and build reproducible evaluation datasets.

WHO SHOULD APPLY?

Motivated students in physics, computer science, mathematics, engineering, chemistry, or related fields. Python experience is helpful but not required.

WHAT YOU WILL GAIN

Mentored research · Practical coding and data analysis · Team collaboration · Opportunities to contribute to publications and open-source science

INTERESTED IN JOINING THE LAB?

Email your background, interests, and availability to:

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