

Shaan Pakala

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[Google Scholar](#), [LinkedIn](#) & [GitHub](#)

About

I am a 1st year Computer Science Ph.D. student at the University of California, Riverside. I work on machine learning research problems with Professor [Vagelis Papalexakis](#). Currently, I am exploring different interdisciplinary research applications of machine learning and tensor decomposition, mainly for the surrogate modeling of combinatorial problems. Some of these scientific domains include material science, physics, and healthcare.

Education

Ph.D. in Computer Science Starting Sept. 2025

University of California, Riverside

- Advisor: Prof. Vagelis Papalexakis

B.S. in Data Science & Engineering Sept. 2021 – June 2025

University of California, Riverside

- 3.9 upper division GPA
- Chancellor's Honor List

Research Experience

Data Science Research Assistant Sept. 2024 – Present

University of California, Riverside

- Worked on AI for Science applications of tensor decomposition, with Professor Papalexakis [2, 3]

Data Science Research Intern June 2025 – Sept. 2025

Lawrence Livermore National Laboratory

- Worked in predictive healthcare group with Dr. Braden Soper & Dr. Priyadip Ray, in collaboration with clinicians/neuroscientists from Stanford & University of Tokyo

NSF REU Research Intern June 2024 – Sept. 2024

University of California, Riverside

- Worked with Professors Papalexakis, Tsotras, and Chen on surrogate modeling to efficiently design optimal data science pipelines (e.g. SQL, hyperparameter tuning) [1]

Bioinformatics Research Assistant March 2024 – Dec. 2024

University of California, Riverside

- Worked with Professor Lonardi on using machine learning for protein sequence analysis

Papers

Main Conference

[1] [Shaan Pakala](#), B. Graw, D. Ahn, T. Dinh, M. T. Mahin, V. Tsotras, J. Chen, E. Papalexakis, “Automating Data Science Pipelines with Tensor Completion,” *IEEE International Conference on Big Data* (2024). **Received Student Travel Award.** [[Link](#)] [[PDF](#)] [[Code](#)]

Workshop

[2] [Shaan Pakala](#), D. Ahn, E. Papalexakis, “Tensor Completion for Surrogate Modeling of Material Property Prediction,” *AAAI Bridge on Knowledge-Guided Machine Learning* (2025). [[PDF](#)]

[3] P. Goulart*, [Shaan Pakala](#)*, E. Papalexakis, “Efficiently Generating Multidimensional Calorimeter Data with Tensor Decomposition Parameterization,” *ICCV Workshop on Representation Learning with Very Limited Resources* (2025). [[PDF](#)]

* denotes equal contribution

Awards

Undergraduate Research Spotlight <i>University of California, Riverside</i>	2025
Student Travel Award <i>IEEE International Conference on Big Data</i>	2024
Chancellor’s Honor List <i>University of California, Riverside</i>	2023 – 2024

Other Experience

Computer Science Grader <i>University of California, Riverside</i>	March 2024 – June 2024
Data Science Challenge <i>Lawrence Livermore National Laboratory</i>	July 2023
Data Science Camp Mentor <i>Spotline, Inc.</i>	July 2022 – Sept. 2022