

# Shaan Pakala

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Website: <https://shaanpakala.github.io/>

Google Scholar, LinkedIn & GitHub

## About

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I am a 1<sup>st</sup> year Computer Science Ph.D. student at the University of California, Riverside, where I work on machine learning research problems with Professor [Vagelis Papalexakis](#). Generally, I am interested in developing machine learning methods for interdisciplinary scientific applications in domains such as material design, physics, and healthcare. The majority of my work involves learning from multidimensional data through the use of tensor decomposition. I have also interned and collaborated with scientists at Lawrence Livermore National Laboratory.

## Education

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### **University of California, Riverside**

*Ph.D in Computer Science*

Sept. 2025 - Present

- Advisor: Prof. Vagelis Papalexakis

### **University of California, Riverside**

*B.S in Data Science & Engineering*

Sept. 2021 - June 2025

- 3.9 upper division GPA

## Research Experience

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### **University of California, Riverside**

*Graduate Student Researcher*

June 2025 - Present

- Research on AI4Science problems (e.g. material science) with Prof. Papalexakis [2] [3] [4]

### **Lawrence Livermore National Laboratory**

*Research Intern*

June 2025 - Present

- Intern/collaborator in the predictive healthcare group with Dr. Priyadip Ray & Dr. Braden Soper

### **University of California, Riverside**

*Undergraduate Researcher*

June 2024 - June 2025

- Worked on machine learning surrogate modeling for hyperparameter tuning, neural architecture search, and SQL query cardinality estimation with Professors Papalexakis, Tsotras, and Chen ??

### **University of California, Riverside**

*Undergraduate Researcher*

March 2024 - Dec. 2024

- Machine learning for bioinformatics (analyzing protein sequences with LLMs) with Prof. Lonardi

## Papers

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### Main Conference

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

### Workshop

- [2] **Surrogate Modeling for the Design of Optimal Lattice Structures using Tensor Completion** 2025  
Shaan Pakala, A.E. Gongora, B. Giera, and E.E. Papalexakis  
*NeurIPS AI for Accelerated Material Discovery Workshop 2025* [[PDF](#)] [[Code](#)]  
**NeurIPS AI4Mat Travel Award**
- [3] **Efficiently Generating Multidimensional Calorimeter Data with Tensor Decomposition Parameterization** 2025  
P. Goulart\*, Shaan Pakala\*, and E.E. Papalexakis  
*ICCV Representation Learning with Very Limited Resources Workshop 2025* [[PDF](#)] [[Code](#)]
- [4] **Tensor Completion for Surrogate Modeling of Material Property Prediction** 2025  
Shaan Pakala, D. Ahn, and E.E. Papalexakis  
*AAAI Bridge on Knowledge-Guided Machine Learning 2025* [[PDF](#)]

\* denotes equal contribution

## Awards

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- Travel Award** 2025  
*NeurIPS AI4Mat Workshop*
- Undergraduate Research Spotlight** 2025  
*University of California, Riverside*
- Student Travel Award** 2024  
*IEEE International Conference on Big Data*
- NSF REU Fellowship** 2024  
*University of California, Riverside*
- Chancellor's Honor List** 2023 - 2024  
*University of California, Riverside*

## Invited Talks

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- Data Science Student Panel** Oct. 2025  
*Data Science Department – UC Riverside*
- Invited Research Talk** [[Slides](#)] Sept. 2025  
*Undergrad Machine Learning Class – UC Riverside*

## Other Experience

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**Computer Science Grader**

*University of California, Riverside*

March 2024 - June 2024

**Data Science Challenge**

*Lawrence Livermore National Laboratory*

July 2023

**Data Science Camp Mentor**

*Spotline, Inc.*

July 2022 - Sept. 2022

## References

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**Dr. Evangelos Papalexakis**

Professor

Department of Computer Science & Engineering

University of California, Riverside

<https://www.cs.ucr.edu/~epapalex/>