

# SHAAN PAKALA

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

Google Scholar, Github, LinkedIn

## Education

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### University of California, Riverside (UCR)

Sept 2021 – June 2025

B.S. in Data Science & Engineering

Upper Division GPA: 3.9/4.0

## Research Experience

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### Data Science Research Assistant

Sept. 2024 - Present

*Supervisor: Professor Vagelis Papalexakis*

UCR

- Research assistant working on solving multidisciplinary problems with tensor completion
- Paper [2] accepted to AAAI 2025 Knowledge-Guided Machine Learning (KGML) bridge program
- Leveraging tensor completion to predict material property values, using the chemical formula

### Bioinformatics Research Assistant

March 2024 - Dec. 2024

*Supervisor: Professor Stefano Lonardi*

UCR

- Worked on bioinformatics research problems using machine learning, related to protein sequence analysis
- Developed machine learning classifier to identify protein subsequences as antimicrobial peptides

### NSF REU Research Intern

June 2024 - Sept. 2024

*Supervisors: Professors Vassilis Tsotras, Jia Chen, and Vagelis Papalexakis*

UCR

- Led team of 3 undergraduates in research project, in collaboration with UCR PhD students
- Presented full conference paper [1] at IEEE International Conference on Big Data 2024.
- Modeled hyperparameter tuning, neural network architecture search, and SQL query cardinality estimation as tensor completion problems to accelerate searching for their optimal configurations
- Developed task-specific tensor completion algorithm to cut parameters without decreasing performance

## Other Experience

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### Computer Science Grader

March 2024 - June 2024

*Supervisor: Dr. Elena Strzheletska*

UCR

- Grader for Upper Division Data Analysis Methods (CS 105 at UCR)
- Facilitated and graded lab and project demos, as well as graded quizzes

## Papers

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### Full Conference Paper

- [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]

### Poster

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