

Alex Karp

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in LinkedIn

Education

B.S. Statistics & Data Science, Mathematics
University of California, Los Angeles
Specialization: Computing

Sep 2021–Jun 2025

GPA: 3.79 — Dean's Honors List (4 Quarters)

Research Experience

CREAS Lab, Washington State University
Research Assistant

May 2024–Present

- Developed statistical models using OpenFAST and ERA5 API to analyze years of hourly wind, power, and energy market data
- Wrote scripts to automate wind simulation and file processing
- Automated data ingestion from APIs and implemented optimization techniques
- Implemented time-series and neural network models for real-time wind speed predictions

Matroid Galois Groups Research, UCLA

Apr–Jun 2023

- Optimized SageMath and Java code to decode and analyze billions of matroids from a terabyte-scale database
- Applied discrete optimization techniques to classify Galois group structures

Publications

Data-Driven Modeling of Wind Farm Power and Revenue Generation [*IEEE Big Data 2024*]

Technical Skills

Machine Learning: Random Forest, XGBoost, Bayesian Inference, Neural Nets, LSTM, MLP, LDA, Regression, Gradient Descent Algorithms

Deep Learning: TensorFlow/Keras, PyTorch

Programming: Python (Pandas, Scikit-learn), R (Stan, Quanteda), SQL, Java, Git, BASH

Data Engineering: API Integration, Web Scraping, Optimization

Projects

Poker Bluff Detection via Sequential Modeling

Tools: Python (TensorFlow/Keras, Scikit-learn, Pandas, Seaborn), R

- Trained an LSTM model on 32,304 player actions (bets, reaction times, board states) scraped from online poker games to detect bluffs with 82% accuracy (vs. 60% for Random Forest/XGBoost), demonstrating superiority of sequential modeling for behavioral prediction.
- Engineered temporal features (decision time, bet ratios, board risk) and validated the importance of decision time differences between bluff and value hands for prediction.

NBA Outcome Prediction with Ensemble Learning

Tools: Python (Scikit-learn, Pandas), R

- Achieved 75% long-run test accuracy in predicting match outcomes through temporal feature engineering and advanced basketball metrics using a Random Forest model on 1,215 NBA games, outperforming Logistic Regression, XGBoost, and SVM models

Extracurricular

Shenanigans Comedy Club, Vice President

- Manage 90+ members and 15 officers spread over six performing departments
- Book venues, acquire funding, and reach out to local comedians to headline shows
- Act, write, and direct for regular sketch comedy shows

Competitive Academic Trivia National placements (IQBT 6th, ICT 5th undergrad), SCT Regional Champions