Alex Karp

4203 29th ave W, Seattle, WA 98199
ivanakarp@g.ucla.edu (206) 351-0216
LinkedIn

Education

B.S. Statistics & Data Science, Mathematics Sep 2021–Jun 2025
University of California, Los Angeles
Specialization: Computing GPA: 3.79 — Dean's Honors List (4 Quarters)

Research Experience

CREAS Lab, Washington State University May 2024–Present
Research Assistant

- Developed statistical models using computer simulation and 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 Temporal Data
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 SoCal Regional Champions