

# KEVIN BAER

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## EDUCATION

### University of California, Los Angeles (UCLA)

Los Angeles, CA

Data Theory and Data Science Engineering - 3.96 GPA

Expected June 2027

- Classes include: Data, Justice, and Society, Multivariable Calculus, and Computer Science I/II in C++, Statistical Programming with R, Programming in Python, Mathematical Modeling and more

### Richard Montgomery (RM) High School

Rockville, MD

High School and IB Diploma

June 2023

- In the IB Magnet Program, a competitive program with ~10% acceptance rate across the county
- 1580 SAT Score (November 2021), 4.00 unweighted GPA / 4.96 weighted GPA, US Presidential Scholar Candidate
- Took 10 APs and 6 IBs including coursework such as AP Computer Science A, AP Statistics, AP and IB Economics, AP BC Calculus, Multivariable Calculus and Differential Equations and IB Higher Level Mathematics
- Won Student of the Month Awards twice, nominated by multiple teachers for demonstrating IB learner traits of Knowledgeable and Caring

## PROFESSIONAL EXPERIENCE

### Pro Football Focus (PFF)

Remote

Football Data Collection Analyst

August 2023 - Present

- Created Data to be sold to all 32 NFL teams, as well as all FBS college football teams
- Analyzed football plays for data points such as position, role, depth, width, stance, defensive line technique, and more
- Collected data on coverage performance through the All Coverage unit, showing mastery of NFL defensive schemes, player techniques, and separation charting
- Took on a Supervisory role with the PP Review Process, entailing viewing disagreements between team members on decisions and adjudicating the correct result

### Magnus Chess Academy

Fairfax, VA

Chess Camp Coach

June 2024 - August 2024

- Taught children ages 5-13 how to play chess at a higher level acceptable for competitive tournament play
- Instilled a life-long love of learning, not only in chess but overall, into students through spirited lessons, competitions and a humorous but demanding coaching style

## LEADERSHIP & INVOLVEMENT

### UCLA Football and Bruin Sports Analytics

Football Consulting Head

October 2023 - Present

- Utilized advanced PFF data to assist the UCLA Football team for opposition scouting and self-scouting operations
- Oversaw team of other consultants to ensure high quality work, met deadlines, and expansion of team responsibilities
- Managed Google Cloud Database, supported by BigQuery, deployed to web via ShinyApps.io
- Engaged with PFF Ultimate metrics to increase and enhance UCLA Football's analytic processes throughout the building

### RMHS DECA

Vice President

September 2022 - June 2023

- Organized 130+ members, led school to 4 straight state titles, sustained culture built around winning and having fun
- International Finalist (Top 20 in the world) (RFSM) (ICDC 2022, 2023)
- State Member of the Year (2023)
- Highest Score of 96/100 in objective testing out of 180+ competitors in RFSM at ICDC 2023
- 1st Place, Restaurant and Food Service Management (States 2020, 2022, 2023), 2nd Place (States 2021)

## RESEARCH PROJECTS

### Big Data Bowl 2024 Entry

Swarm Score: Quantifying Rallying to the Football

January 2024

- Research paper written using the NFL's proprietary spatial tracking data
- Swarm Score is formed by comparing each defender's bivariate normal spatial influence probability density function against the ball carrier's spatial influence model to determine the number of defenders swarming the ball carrier
- <https://www.kaggle.com/code/kevinbaer/swarm-score-quantifying-rallying-to-the-football>

### Carnegie Mellon Sports Analytics Conference 2024

Digging Deeper: Volleyball Metrics with Full-Court Coverage

October 2024

- Project to be presented at Carnegie Mellon Sports Analytics Conference on November 2, 2024
- Analyzed 6531 ball contacts, built comprehensive statistics to measure player performance, predict future and hypothetical match outcomes, and enhance viewer enjoyment of volleyball
- Funded by UCLA Undergraduate Research Center-Sciences Grant

## PROGRAMMING LANGUAGES

- R, Python, SQL, C++