

# ADAM MCNELIS MAHMOUD

Berkeley, CA 94704 | November 2025

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## EDUCATION

### University of California, Berkeley

B.A. in Data Science — *concentration in Applied Math and Modeling*

Coursework: Foundations of DS, Computational Structures, DS Principles, Data Structures, Probability for DS, Data Engineering

Berkeley, CA

GPA: 3.85

B.A. in Applied Mathematics — *concentration in Numerical Analysis*

Coursework: Multivariable Calculus, Linear Algebra & Differential Equations, Abstract Algebra, Real Analysis, Complex Analysis, Numerical Analysis

## TECHNICAL SKILLS

Coding: Python, SQL, R, Java, MatLab, HTML

Databases & Data Tools: PostgreSQL, MongoDB, Excel, Tableau, ATLAS.ti

Libraries: Pandas, statsmodels, Scikit-learn, Scipy, Keras

Specializations: Python in Excel, Clustering Algorithms, Data Pipelines

## WORK EXPERIENCE

### Data Scientist (Part-Time)

Sept. 2025 – Present

Omnium

Remote

- Support ad-hoc client analyses by building regression pipelines and ANOVA testing frameworks to evaluate cross-brand/product effects and promotional lift, informing optimized pricing and promotion strategies.
- Update syndicated retail datasets and produce monthly business reviews for clients, highlighting emerging patterns and risks to guide account teams and decision-making.

### Data Scientist Intern

May – August 2025

Omnium

San Diego, CA

- Built and compared regression models to quantify market preferences, projecting expected sales growth from new product launches and establishing a scalable framework for brand innovation analyses.
- Developed interactive dashboards and led sales planning calls for 2026 with client brokers and sales managers, informing recommendations on distribution, pricing, and promotion.
- Partnered with Omnim's R&D team to improve components of the company's demand forecasting framework, contributing research insights that shaped ongoing modeling development.

### Data Intern

Jan. – May, Aug. – Sept. 2025

Fung Institute for Engineering Leadership, UC Berkeley

Berkeley, CA

- Analyzed student and alumni data to evaluate program impact, drive improvements in accessibility and equity, and inform strategic academic decisions for the Fung Fellowship and Master of Engineering programs.
- Maintained and enhanced data workflows, ensuring accurate reporting and consistency across program management systems.
- Created data visualizations for use by teaching and program teams, presenting results to internal and external stakeholders.

### Data Analyst

Sept. 2023 – Mar. 2025

Enrollment Management Department, UC Berkeley

Berkeley, CA

- Queried, cleaned, and visualized student demographic and academic data using SQL, Python, Excel, and Tableau.
- Collaborated with department leaders and analysts to translate insights into clear recommendations, informing strategic enrollment decisions.
- Analyzed admissions data to set residency targets for 2024, resulting in the enrollment of 800+ additional in-state students.

## RESEARCH PROJECTS

### Seasonality Clustering – A Hierarchical Agglomerative Approach | Python (SciPy, scikit-learn, Matplotlib)

Omnium Internship

- Implemented hierarchical agglomerative clustering on product seasons with custom distance metrics combining velocity variation and temporal gaps to favor continuous seasonal clusters; evaluated models across multiple linkage criteria using dendograms and silhouette scores.
- Applied clustered season definitions to pricing regressions, reducing multicollinearity compared to standard 13-period models and achieving higher  $R^2$  values with improved demand predictions.

### Analyzing Academic Resource & Funding Allocation at UC Berkeley | Excel

UC Berkeley CAPRA

- Investigated UC Berkeley's central campus finances for the Academic Senate's Committee on Academic Planning and Resource Allocation, analyzing departmental and divisional ledgers to inform policy recommendations.
- Queried CalAnswers data on enrollment and revenue streams, producing visualizations of program-level trends to identify sources of revenue and loss.

### Exploring Indian NGO Distribution | Python (Pandas, RegEx, Matplotlib), Git

Data Science Discovery Program

- Collaborated with nonprofit Daanmatch to analyze funding allocation for 10,000+ Indian NGOs, standardizing address data and developing reproducible workflows using Git.
- Conducted EDA, cleaning, and visualization, presenting findings at the UC Berkeley Data Science Discovery Symposium.