Adam McNelis Mahmoud

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Education

University of California, Berkeley — Berkeley, CA
B.A. in Data Science — *concentration in Applied Math and Modeling* — Aug. 2022 – May 2026
B.A. in Applied Mathematics — *concentration in Numerical Analysis* — GPA: 3.86 / 4.00
Coursework: Data Structures, Data Engineering, Machine Learning, Probability, Data Mining, Linear Algebra, Numerical Analysis

Experience

Data Scientist — 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 – Aug. 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 Omnium'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 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.
- 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.

Projects

Equitable College Planner | *Python, Streamlit, Git, DuckDB, PCA* — UC Berkeley Datathon for Social Good
- Built an interactive college recommendation tool that ranks institutions by student-defined fit using weighted similarity scoring across numeric and categorical features, implemented through a DuckDB-based data pipeline.
- Developed an ROI model incorporating residency-adjusted cost, retention and graduation outcomes, and earnings estimates; visualized personalized recommendations using PCA projections of schools and a user preference vector.

Seasonality Clustering – A Hierarchical Agglomerative Approach | *Python, SQL, VS Code* — 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 dendrograms 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.

Technical Skills

Languages: Python, SQL, R, Java, MatLab, HTML/CSS
Libraries: Pandas, NumPy, scikit-learn, statsmodels, SciPy, PyTorch, PyMongo, Keras, Matplotlib/Seaborn
Databases & Tools: PostgreSQL, DuckDB, MongoDB (NoSQL), Excel, Tableau, Git, Jupyter
Methods: Regression, ANOVA, Hypothesis (A/B) Testing, Forecasting, Clustering, Feature Engineering, PCA, Neural Networks