ADAM MCNELIS MAHMOUD

Berkeley, CA 94704 | December 2024

📞 (916) 996-5404   ✉ adam.mcmoud@berkeley.edu   in linkedin.com/in/adam-mcnelis-mahmoud   🌐 adammcnelismahmoud.com

EDUCATION

University of California, Berkeley   **August 2022 – May 2026 (Expected)**

B.A. in Data Science - concentration in Applied Math and Modeling   *Berkeley, CA*
B.A. in Applied Mathematics - concentration in Numerical Analysis   *GPA: 3.9*

EXPERIENCE

Data Analyst   **September 2023 – Present**

Enrollment Management (EM) Department, UC Berkeley   *Berkeley, CA*
- Query, clean, and visualize university demographic and academic data using Tableau, Excel, Python, and SQL.
- Collaborate with department heads and data analysts to communicate data insights, both in technical terms and in clear, accessible narratives, to inform strategic enrollment decisions.
- Conduct data analysis to determine the number of admissions required to meet in-state residency targets for the 2024 academic year, directly contributing to the enrollment of over 800 additional in-state students, a 1% increase compared to previous years.
- Develop the EM website by designing and implementing interactive, data-driven visualizations to showcase enrollment trends and student demographics. Write HTML code for specific elements to ensure accessibility and enhance the user experience.

TECHNICAL SKILLS

Coding Languages: Python, Java, SQL, R, HTML, RegEx, LaTeX   **Data Analysis Tools**: Tableau, Excel, Google Sheets, Power Bi
Libraries: Numpy, Pandas, Matplotlib, Seaborn, Scikit-learn   **Languages**: Spanish (California State Seal of Biliteracy)

EXTRACURRICULAR

Student Advisory Board Member   **October 2024 – Present**

College of Computing, Data Science, and Society (CDSS), UC Berkeley   *Berkeley, CA*
- Advise the College of CDSS on student needs, priorities, and emerging concerns through regular pulse surveys.
- Contribute to discussions on initiatives including advising processes, diversity and inclusion, and student organization support.

MPS Scholars Program Mentor   **August 2024 – Present**

Mathematical and Physical Sciences (MPS) Scholars Program, UC Berkeley   *Berkeley, CA*
- Mentor students majoring in math, holding bi-weekly group meetings and individual one-on-one meetings.
- Guide students through the MPS department and math major by providing tailored academic advice, sharing personal experiences, and offering support to foster a sense of community and academic confidence.

Exploring Indian Non-Governmental Organizations (NGO) Distribution   **January 2024 - May 2024**

Data Science Discovery Program   *Berkeley, CA*
- Collaborated with Daanmatch to understand how to better allocate funding for over 10,000 NGOs across India.
- Standardized the self-reported NGO addresses (primarily using RegEx) and mapped their geographic distribution, identifying regions with high NGO concentration to inform strategic planning.
- Conducted exploratory data analysis, data cleaning, and visualization using Python (Pandas, Seaborn, Matplotlib), culminating in a poster presentation at the Data Science Discovery Program Symposium.

PROJECTS

Spam Email Classification | *Python, Scikit-learn, Pandas, Regex, Matplotlib*   **November 2024**
- Developed a logistic regression model to classify over 8,000 emails as spam or not spam, achieving 85% test accuracy through feature engineering and model tuning.
- Used RegEx to parse email text and engineered features such as custom word presence indicators, message length/format, and punctuation frequency, overcoming inconsistencies in text data to create meaningful model inputs.
- Evaluated model accuracy with precision, recall, and ROC curves, iteratively refining the feature set and optimizing hyperparameters to minimize false positives and enhance reliability.

Cook County Housing Price Prediction | *Python, Scikit-learn, Pandas, Matplotlib, Seaborn*   **October 2024**
- Developed a predictive model for housing prices in Cook County using `scikit-learn`, leveraging exploratory data analysis, feature engineering, and linear regression to analyze over 500,000 records.
- Designed a comprehensive data pipeline, including outlier removal, log transformations, and one-hot encoding.
- Evaluated model performance on validation data and mitigated potential biases by analyzing historical disparities in housing data, ensuring fair and accurate predictions.

RELEVANT COURSEWORK

Data Science: Foundations of DS, Computational Structures, DS Principles, Data Structures, Numerical Analysis for DS
Mathematics: Multivariable Calculus, Linear Algebra, Discrete Math, Abstract Algebra, Analysis, Complex Analysis