

## Sukaina D. Alkhaldy

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### EDUCATION      East Lansing MI, Year Senior

**Cumulative GPA:** GPA 3.557 /4.00, Dean's List Honors (2 consecutive semesters)

**Michigan State University** | *East Lansing, MI* | **Graduation Day** May 2026

*Bachelor of Science* Double Majoring in Data Science and Statistics.

East Lansing High School: Diploma

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### SKILLS

**Programming Languages:** Python, R Language, and C++.

**Python Libraries:** NumPy, Pandas, Scikit-Learn, Seaborn, Matplotlib

**Big Data and Other Tools:** Jupyter Notebook, GitHub, RStudio, Visual Studio Code, and Pycharm.

**Other Skills:** Machine Learning, Debugging, Statistical Analysis, Time Management, Teamwork, Data Organization, SQL, Tidy Data.

**Languages:** English and Arabic

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### TECHNICAL EXPERIENCE

#### Forest Fire Analysis in Portugal [OB]

January,2024 – April, 2024

Analyzed wildfire spread using data preprocessing and visualization (Seaborn, Matplotlib).Applied Linear Regression and SVM models to predict burned area size. Found temperature and humidity as key drivers, with dataset imbalance affecting accuracy.

#### Pandemic Impact Analysis [OB]

October ,2023- December

,2023Analyzed U.S. employment and GDP trends pre- and post-lockdown and identified significant declines in GDP growth and employment rates.Learned importance of aligning datasets after challenges with mismatched timeframes.

#### Comparative Analysis of penguin populations [OB]

July ,2024 - August ,2024

Analyzed penguin body mass across three islands using ANOVA and t-tests. And Identified Gentoo penguins on Biscoe Island as a key factor in weight differences. Found male penguins weigh ~683g more, aiding survival in cold climates.Concluded populations were balanced, but Torgersen Island required further research.

#### Neural Decoding of Identity and Subject Information in Macaque AM Face Patch

Spring ,2025

Analyzed neural spike recordings from macaque AM face patch (Freiwald & Tsao dataset with 25 identities, 8 orientations, 193 files, 2 subjects).Engineered features from 400 ms post-stimulus activity and applied supervised models including logistic regression, SVC, random forest, and KNN.Achieved about 70% accuracy with random forest for face identity classification and 68% accuracy for subject classification, supported with cross-validation and feature importance visualizations.

#### NYC Yellow Taxi Fare Analysis

Spring ,2025

• Analyzed 2023 NYC Yellow Taxi dataset (6.9M cleaned records, 19 features) to investigate factors influencing fare pricing.Applied multiple linear regression, ANOVA, Tukey HSD, and t-tests to assess effects of trip distance, duration, day of week, and time of day.Found trip distance as the strongest predictor of fare, with weekend night trips unexpectedly showing the lowest average fares.

#### SpartaHack X – Hypertension Risk Calculator

February,2025

Developed a logistic regression model in Python to predict hypertension risk based on age, cholesterol, and BMI.Built an interactive GUI for user-friendly risk assessment.

#### CERTIFICATIONS: Advanced Python: Working with Databases| LinkedIn