

# Ayman Khan

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## Education

### Middlebury College

*Candidate for Bachelor of Arts, Major in Computer Science*

Middlebury, VT

*Expected May 2025*

**Relevant Coursework:** Data Structures, Machine Learning, Computer Graphics, Regression, Delving into Data, Statistical Learning, Algorithms and Complexity, Software Development, Natural Language Processing

**Languages:** Python, R, C++, C, Java, JavaScript, HTML, CSS, Stata, SQL, Excel

**Frameworks and Libraries:** React, NextJS, Flask, Material-UI, scikit-learn, pandas, NumPy, Tesseract, p5.js

## Experience

### Green Mountain Care Board

*Data Analyst Intern*

Montpelier, VT

*June 2024 - August 2024*

- Evaluated provider network adequacy across multiple insurance product subtypes, using patient-provider ratios to identify gaps in healthcare access.
- Analyzed datasets covering over 200,000 healthcare providers and 2 million patients to assess network adequacy, provider availability, and access across various insurance plans.
- Created detailed visualizations and reports, highlighting trends and disparities in provider networks, which informed policy recommendations to improve Vermonters' healthcare access.
- Utilized R to process large datasets and generate actionable insights, enhancing the organization's data-driven policy-making approach.

### Fairbanks Museum & Planetarium

*Data Analyst Intern*

Hybrid, St. Johnsbury, VT

*June 2023 - August 2023*

- Used the Tesseract machine learning library in Python to convert over 1000 handwritten flashcard data to Excel.
- Employed R libraries (dplyr, tidyverse, ggplot) for data analysis and visualization of flower bloom and fruit dates trends.
- Managed an online Zooniverse data dashboard for publishing visualizations and data.

### Beyond Borders Orphan Aid

*Full-Stack Developer (Part-Time)*

Remote, Mandera, Kenya

*January 2024 - Present*

- Developed the website for a non-profit organization supporting orphan education in Mandera, Kenya using JavaScript, HTML, and CSS.
- Currently converting the website to React framework for enhanced performance.
- Creating a database to store information about newsletter subscribers and donors.

## Side Projects

### Investigating the Attributes that Influence Player Ratings in FC24

- Utilized Support Vector Machine (SVM) to predict player ratings in FC24 based on physical attributes.
- Applied hierarchical clustering and principal component analysis to assess attribute impacts on player ratings.
- Conducted data analysis and visualizations using R.
- <https://aymankhan2003.github.io/aymansportfolio.github.io/assets/FinalStats.html>

### Market Value Predictor

- Implemented machine learning models (random forest regression, LASSO) to predict soccer player market values.
- Conducted data manipulation and extensive analysis using R, including web scraping.
- Performed feature engineering in Python with scikit-learn, pandas, and numpy.
- Developed a UI using Flask (backend) and HTML (frontend) to interact with the prediction models.
- <https://aymankhan2003.github.io/posts/project/ProjectBlogPost.html>