Statement of Research Interests and Professional Goals

Aiden B. Jajo

Master of Science in Big Data Analytics

San Diego State University

I view graduate study in Big Data Analytics as a way to use data not only to improve systems, but to understand the people within them. This goal has shaped how I approach problems by asking "why" repeatedly and searching for patterns that tell an important story.

What I am most drawn to are data driven decision problems that center on predicting outcomes, identifying inefficiencies, and improving system performance. Analytics to me is not only about producing accurate results, but about understanding why those results matter and how they can be used to support better decisions moving forward. I am particularly drawn to applying data analytics within healthcare systems. Growing up and working in San Diego, a city that is defined by its diversity, has exposed me to individuals from many backgrounds who experience healthcare very differently. Through my work in an independent pharmacy, I have interacted directly with patients and observed how delays, system inefficiencies, and access barriers currently in place can affect people's daily lives. These encounters have shaped my belief that improving healthcare systems is one of the most impactful ways to improve quality of life. I am driven by the idea that the data already embedded within healthcare operations can be used more thoughtfully to improve equity, efficiency, and, most importantly, patient outcomes.

Throughout my academic studies, I have explored this interest by engaging in hands-on analytical work. In a recent portfolio project, I independently analyzed 2023 Medicare Part D prescriber data using Python to identify $3.84 billion in potential savings from increased generic drug adoption. This question emerged directly from my experience as a pharmacy clerk

observing patients struggle with medication costs, leading me to work with multi-million row datasets where I identified 454 drugs with both brand and generic versions available but disproportionately high brand utilization.I translated these findings into interactive Tableau visualizations supported by rigorous academic sourcing. Watching meaningful insights emerge and translating them into clear narratives is what I find most rewarding about analytics work. Alongside healthcare, I am also drawn to logistics and social data, most notably where they intersect with system-level decision-making. Efficient logistics are essential to effective healthcare delivery, while social data provides critical context that ensures individuals are not reduced to averages or stereotypes. I look forward to developing my skills in predictive modeling, data mining, and visualization to develop a stronger understanding of complex datasets and communicate insights clearly across diverse audiences.

I chose to pursue a master's degree in Big Data Analytics rather than a general Computer Science path because I value the balance between technical rigor and applied problem solving. While the Big Data Analytics program is broad in scope, I am particularly drawn to the opportunity to engage with faculty whose research aligns with my interests in human centered healthcare systems, including the work of Aubrey N. Beck. Professionally, I aim to work as a data analyst in the healthcare sector, helping organizations make informed decisions by humanizing data and ensuring insights drive meaningful, positive change.