Salman Noor

Senior Capstone

20 May 2025

While pursuing a major and minor in computer science and data science, respectively, at the University of St. Thomas, not only have I gained knowledge professionally and technologically enhanced, but what initially became a curiosity about how things and information work has turned into an aspiration to use technology to create solutions to real-world, people-oriented challenges. Coursework, internships, and collaboration have collectively contributed to building my professional self and belief that data does good.

My most distinctive example of development is to be found in the NFL Injury and Career Data Analysis project. Analyzing more than 700 wide receivers combined performance and career stats, my team had set out to determine if athletic tests were effective predictors of NFL success or not. I led statistical modeling through R and Python to develop several multiple linear regression models and configured Power BI dashboards to present findings effectively. We determined that some of the measures like bench press performance were statistically significant but there weren't very many combined tests with predictive value. This project forced me to critique, test hypotheses against data, and report results concisely. Another is the Power BI Basketball Analytics project. We analyzed historical NBA statistics from more than 70 years past, comparing historic players with present-day salary information. I was tasked with creating the star schema data model design and developing the interactive dashboards. As the deadline for the project loomed, I was responsible for leading the team to manage last-minute revisions,

thereby learning to stay calm and manage team dynamics under pressure. It was a revelation in the sense that my technical and human skills were best suited to complement each other.

Technology has always been in my view a technical science code, logic, and implementation. With health care and human research experience, however, my thinking changed. As Business Analyst at Essentials Health Services, I built Power BI dashboards that allowed clinic managers to track no-shows and provider loads. I discovered that small data-driven adjustments, like pushing appointment reminders to the weekend, did in fact have a significant effect on patient care. It taught me to appreciate a feeling of getting it that technology isn't about being efficient it's about making it possible for better decisions, equity, and access.

The Dungarvin Mental Health Specialist role was the turning point in both my career growth and people experience. I worked with clients who were having behavior and mental health issues in a residential setting as a Mental Health Specialist. The most difficult aspect was to remain present and emotionally grounded and maintain effective communication in times of crisis. I mastered the art of writing meticulous case notes appropriately, carrying out behavior plans, and shifting to each client's individual needs. This experience furthered my ability to remain calm under pressure, work as a part of a care team, and communicate sensitively and clearly with both clients and stakeholders.

In teamwork, the issue was management of personality, time, and expectations. Overlapping functions or out-of-harmony membership was evident in a few instances. Assuming the role of communication and clarification in this type of situation allowed me to grow as a team member and leader.

Impact ranks among my top values. Sports analytics, health research, or otherwise, I desire my work to have a real-world impact. That is why I gravitated towards socially

responsible projects of long-lasting impact. My technical contributions from SQL dashboards to machine learning algorithms have always revolved around simplicity, usability, and ethical interpretation. I aim to build tools and insights that help real people solve real problems, which aligns deeply with the University of St. Thomas' mission of advancing the common good.

Over time, I've come to appreciate that technical skills are only half of what makes a great contributor. For example, on each NFL and NBA analytics assignment, my technical skill of presenting results in simple language that one could explain to everyone, in graphical language, was important. Presenting to non-technical stakeholders such as clinic directors or project colleagues required translating numbers into compelling stories. My communication, organizational, and leadership soft skills through team meetings or graphs enabled my technical work to be important.

As I move into the working arena, I envision myself developing technically and professionally. I would like to gain more in cloud platforms, machine learning, and ethical AI and develop leadership capabilities in cross functional settings. I am eager to discover missions where I can help organizations make a purpose, especially in healthcare, where data can impact.

In summary I gained a lot of knowledge in computer science and did good projects over my four years. I feel ready and accomplished. My four years at the university has been completely transformative and a good experience.