**What draws you to business analytics as a field? Why are you interested in the Carlson School’s Business Analytics program specifically?**

Seeing the hospital authorities rejoice at the realization of more doctors joining their cause spurred a feeling of both joy and relief. Going back two months in time from this moment, I was tasked with leading a team of four to deliver dashboards on a state-run health insurance scheme to the leadership of a government entity. We analyzed large swathes of data which highlighted the dearth of doctors in several districts causing the local population to travel several miles to get the required care.

We visited several hospitals to confirm ground scenarios and were relieved to see more doctors being assigned to districts facing acute shortages. This transformative effect of business analytics reaffirmed my decision to work in healthcare analytics and to provide value to society. My motivation to pursue Carlson School’s MSBA is primarily because of the value and impact-driven learning approach followed in the experiential learning component. I firmly believe my ideals of working towards societal benefits sit in line with the school’s beliefs and with the mission of the Analytics for Good Institute (AGI). My experience in delivering analytics solutions for large-scale populations (40 million) while working with the government would enable me to contribute towards the research done at the AGI as well.

**What career roles (job positions, industries, companies) would you be interested in landing directly after completion of the program? How will the Carlson School’s Business Analytics program help you achieve your career goals? (Approximately 275 words)**

While the outcomes of the analytical dashboards were highly fruitful, they did not come without obstacles, and I believe there is always room for improvement. For instance, I could have created more value by predicting trends from patient data to determine the early signs of an epidemic. Topics such as predictive modelling and real-time data streaming presented themselves as bottlenecks during this engagement which I could have tackled better given a formal education in advanced analytics. This is where I strongly believe the MSBA program will help me.

Courses such as Predictive analytics (MSBA 6421) and Big Data analytics (MSBA 6331) are of deep interest to me. I believe these courses would inch me closer to being a data analytics consultant equipped to implement prediction techniques and real-time analysis, specifically in the healthcare consulting and insurance domains. This would give me the perspectives I lacked while solving problems in staffing requirements, predicting patient surges and more.

Just to throw in an example, Carlson Analytics Lab’s (CAL) work with HCMC filled me with excitement and intrigue as it resembled a staffing prediction challenge I faced. Prior experience in such situations as the one faced by the Lab’s work with HCMC could have better prepared me for that challenge. The guidance that I would receive through CAL would advance my knowledge not only technically but as shown through the HCMC engagement, domain (healthcare consulting) wise as well.

Furthermore, I would be thrilled to trace out my goal by joining the ranks of 20% of the 2022 batch who choose the consulting industry post-graduation and connect with alumni in firms like ZS Associates and Axtria both of which work on health/pharma consulting.

**An aptitude for technical and quantitative work is necessary for success in the Business Analytics program. Please provide a specific example(s) from your past academic project, internship, or professional experience where you used a computer programming language, technical/quantitative tool or method to solve a problem. Please provide details describing the problem/situation, the actions you took, the specific tools, programming languages, and methods you used, and the results of your actions. (approximately 275 words)**

The concept of ‘analytics’ began to take root during my undergraduate studies through courses such as ‘Statistics For Data Analytics’ and ‘Business Mathematics’. It gradually flourished during my initial internship experiences and blossomed into a deep-rooted passion for analytics over the past year at KPMG. I consistently skilled up at KPMG and started by making sure my fundamentals in RDBMS were strong by understanding PostgreSQL in depth.

After gaining a strong command over SQL querying, I moved on to PL/pgSQL implementing an innovative dynamic workflow DB design coupled with a function written in PL/pgSQL. The current web application in place had hard-coded the flow of events within their backend code. There were frequent downtimes and wait times (sometimes weeks!) if there was a need for a change in the workflow. My implemented solution involves storing the workflow details in a tree structure in tables and returning the next step in the flow using a recursive PL/pgSQL function I had written, completely sidestepping any downtimes!

The analytical dashboards we had built faced a major bottleneck in the form of data pipeline refresh times. The cumbersome task of data load/refresh using Logstash to Elasticsearch (used as a NoSQL database) would take 12 hours and would sometimes crash due to memory consumption. Challenging myself to try novel methods, I learnt and implemented a single-node spark environment and coded a PySpark program to send data from Oracle DB to Elasticsearch, eliminating Logstash. This saw a huge improvement in performance by cutting short time taken to just 2 hours (83% decrease).

I’m excited to augment my learning at the Carlson School and share more such experiences with the diverse cohort at the school. The opportunity to be part of the Carlson Analytics Lab is something I would cherish and try to utilize as best as I can. Moreover, I can't wait to be a part of events such as the Minnesota State Fair and to proudly wear the maroon and gold!