Daniel Craig

Personal Statement

It was 3 a.m. and the tick-tack tactile sound of keystrokes with the odd click of a mouse here and there echoed through the foyer of my family’s home. I was 15, trying to be dead silent so my parents wouldn’t wake up, and had a private server of World of Warcraft in the background with a Wikipedia page up about Deep Blue, the first computer to win a game and match against a reigning world chess champion at the time of its creation. I was in awe that someone could make a machine to do that. “That’s almost like the sci-fi movies! Wouldn’t it be cool if we could program computers to play video games perfectly for us? How did they do that?” I now look back on that memory as probably the first time data science, machine learning, and the like caught my interest. These moments continued.

An avid fan of a MOBA game in my college years; I played Dota 2, a 5v5 team-based game where players level up fantasy inspired heroes to destroy the enemy base. Known to some as one of the most strategic video games ever created and OpenAI had recently been announced that garnered attention from Elon Musk. It was an ‘A.I.’ that took down every professional team the world had to offer. Again, the same thoughts from being 15 repeated in my head. I sidelined it as something not for me.

I remember sitting in Dr. Fay Payton’s capstone course my senior year at NC State and feeling the fascination that I could grab D.H. Hill’s library room usage from motion sensors to inform the library on behavior. The information alone was giving me ideas on what the library could do depending on what story the data told. Heavily trafficked areas, which study areas did students prefer, time, day, or what restaurants were open in the Brickyard food court at the time were all questions to be answered. During that same semester, I remember sitting in Professor Fowler’s classroom as she taught us how to use regression to help create models for predictions and see correlations between variables. This was so cool but I was already a senior in Bus. Admin with a concentration in Information Systems. I took Calculus II and III as electives and when my friends asked why I always said “for fun.” Later, I looked at the feasibility of double majoring in statistics while I was a junior, but my mental health gave way. I decided to graduate in four years to avoid debt and get to work as fast as possible. Luckily my parents helped with a therapist at the tail end of my junior year through my graduation.

I graduated and went to work at Kioti located in Wendell, NC. In my free time, I started Andrew Ng’s Machine Learning course, and followed along some python tutorials that were available to me through work. I knew I needed more structure for me to be effective. I paid for a session with a Machine Learning engineer who gave tutoring through a service called WyzAnt and he mapped out for me the material I would need to master. I started to explore the options of continued education under a university. I knew I wanted to be a part of this. Despite my fear of being an unviable applicant, I used NC State’s Master of Analytics as a benchmark to get started. I spoke with Valerie, head of admissions, a few professors, and chose ST517 and ST518 as courses to help prove my efficacy in academia since my undergraduate GPA was not to my standards. Unfortunately, just as my first attempt at ST517 started, ransomware crippled the company for about two weeks. My manager left a few months before and we had yet to replace him, leaving myself as the sole individual largely responsible for recovery and prevention. I forget the number of hours each week that I worked. I do recall the first two weeks being near 100 hours. The following weeks were somewhere between 60 to 70. Getting Kioti operational may have taken a week and a half, but true recovery took months. Ransomware hit just as my ST517 course started that fall. I achieved a middling grade and re-took in the summer semester for a B+. Dr. McGowan is a absolutely brilliant teacher. Although, Dr. Osborne, of ST518, is proving to be a tough competitor for her as my favorite teacher.

My memories of high school and undergraduate years are unfortunately drowned in a struggle with mental health. Although I am a firm believer that anxiety or depression is something an individual will always need to manage such as diabetes or a speech impediment, the memories I recount here are some of the tools I’ve been gifted with, by those around me, that re-ignited the spirit I needed to fight that battle and re-discover my passion for this craft and how I can use it.

With a gentle and elegant tone, Dr. Snow softly caught my rapidly deteriorating mental state with the following words. “Daniel, I think that’s a bit unfair to yourself. If someone was talking to your friend the same way you just talked about yourself, what would you tell your friend?”

I raised my head a bit, regaining an amount of belief in myself as the pitch black tar in my chest started to melt to the warmth another person was emanating for me. I responded; “I’d tell them it’s not true and to keep trying.” Dr. Snow lips parted to reveal one of the most heart warming smiles I can recall. “That’s what it’s all about, Daniel.” With glossy, wet eyes, I chuckled a bit as an oddly familiar and childish joy sprung up in my chest.

He opened the car door and grabbed his luggage. It was a baby blue sky, a shining yellow sun, and a couple-puffy-clouds kind of day. The roar of jet engines soaring above and tires gripping asphalt as cars turned out of the drop off area echoed underneath the concrete canopy. “Do you think you’ll like your Ph.D. program, man?” I said, as I hugged my friend Yoshi. We shared a few moments before he stepped towards terminal 4 at the RDU airport. He hesitated, giving evidence to some potentially deeper thought. “I think I will. I want to see what I can find out about fractures and material stress. There’s something about it that’s just interesting to me.”

No one could log into their computers. Operations had ceased. 200 employees and a company were not even crawling. The people that have helped me grow, given me opportunity, and shared jokes with me in the breakroom needed my help. After several hours of breaking into my own system, I found the first inconspicuous text file reporting in a professional tone that it would restore access for a ransom. After gathering myself, I walked towards my chief officers, who were sitting in an office speaking Korean. As they saw me walk towards, they beckoned me inside. In a somber tone, unsure of what was about to happen, I calmly reported to my superior:

*“We have been compromised by a specific account that we knew was suspicious. It was associated with a development project and had elevated permissions. I can confirm this is ransomware. It could’ve been stopped had we had certain systems in place, but I should not have taken the chance to leave it activated, even at the cost of development. You may have questions at this point whether you should still employee me, and I don’t mean to distract from that conversation, but with your permission… I’d like to focus on getting us up and running again.”*

Above are the memories I have that I believe have influenced me towards this path. I think the way to achieve being able to impact my community, and provide others the opportunities like I’ve had, is to use that passion I’ve found for this field in computer science and information technology. It is a privilege to pursue one’s passion. Helping those around you is fulfilling and although seemingly unrelated, I believe higher education is a way for me to have a greater impact on the world. Data science and the applications of statistics in decisions by machines or humans is the most interesting topic I have ever come across. I’d like to learn more about it and would be honored to pursue that at NC State.