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CSC 135

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Becoming a CSC Major

I clip my car's bumper on the curb just right, and for the second time, it happens. I'm flying across San Francisco, soaring high over the Golden Gate Bridge before landing in the bay somewhere just short of Alcatraz. My seven year old self has been playing Midtown Madness 2 for just over three hours, trying to replicate that particular bug because I found it so hilarious the first time it happened. My parents always knew I would grow up to be a programmer. They could see it in the way I enjoyed using computer applications in ways they were never intended to be used, seeing just how many ways I could get my games to fail, essentially debugging programs starting at the age of 7. I continued like this, breaking video games in any way possible, until one fateful day over the summer of 5th grade I was introduced to Magic: The Gathering.

Magic: The Gathering is a game that to this day, truly has it all. On the surface, it's a fun way for an 11 year old to learn basic rules, disregard the more nuanced ones, and learn basic resource management and sequencing along the way. The way I played, there really wasn't much consequence to poor sequencing, and even less consequence to building awful decks, but it was fun, and I picked up on the concepts, slowly learning the concepts of playing around an opponent's cards –a facsimile to basic if/else logic- and even developing an understanding of stack logic, which is a core element of higher level Magic: The Gathering play. This hobby is something I still enjoy and play as frequently as possible, and even as a career programmer and

CSC major, the game still continues to help develop and maintain my understanding of logical puzzles.

My love for card games and the logical puzzle they presented only deepened when Blizzard released Hearthstone: Heroes of Warcraft on March 11, 2014. Where Magic: The Gathering plays more into the logical aspects of programming –by nature of it having human judges to help resolve various interactions- Hearthstone plays more into the debugging aspects of programming. With no human judge to officiate matches, the boundaries of “what is legal” are restrained only by the robustity of Blizzard’s code. At Hearthstone’s highest levels of play, players were expected to have memorized all manner of inconsistent interactions, and competitive decks which exploited unexpected use cases abounded. An example of this is a deck which used three cards: a dragon that limited both players’ turn timers to 15 seconds, and two cards that returned each other to your hand when played. The exploit was that you could output so many animations on your turn that your opponent’s would be eaten up by the animations, and they would not get to act. You then got your turn again, played a bunch of animations, and let your opponent’s turn get eaten up.

I especially enjoyed decks such as that one, as they highlighted the difference between people and computers. Where a person would see an interaction such as the aforementioned and intuitively know that the victimized player shouldn’t have their turn skipped by something as simple as animations, a computer makes no distinction. It concerns itself only with what is legal, and what is legal is defined by a human for whom perfect foresight would be impossible. Computers took on a new beauty in my eyes, as they would always do exactly what a programmer told them to do, even if the computer’s end behavior is entirely unintentional and undesirable to the programmer in question.

My entire life up to the age of 18 had been lived with my passion for computer logic and my passion for competitive gaming living in relative harmony. College is what finally struck the dividing line between the two. Competitive gamers frequently did not go to college, instead devoting their lives to the video game of their choice, attending tournaments, live streaming 8 hours a day, and doing their absolute best to make a living from their passion. Programmers, on the other hand, went to college, slogged through classes, and spent years training for a career they weren't even guaranteed to obtain. I made a decision to try live streaming for a time, and for six months, I played Hearthstone for almost 8 hours a day, seven days a week, livestreaming inconsistently. I was miserable. I enjoy games as much as the next guy, but I realized on that journey of self-discovery that I do not enjoy games nearly enough to play them for eight hours a day. They are to me an indulgence, like fast food, not a lifestyle to partake of every day.

I was not yet ready to give up, and did some research into pro-gaming versus programming as career options. The average career gamer makes somewhere in the range of \$40-100k per year, depending on talent, and frequently that talent comes with an expiration date at ~30 years old. Past that age, most pro gamers either enter into the work force sans college degree, or become commentators for the game they used to pour their life into. I was even blessed enough to have a conversation with Patrick Sullivan, former profession Magic: The Gathering player and current Magic: The Gathering commentator for Star City Games, who confirmed this trend. The average career software engineer makes upwards of \$100k per year, and is likely to maintain that career until retirement, with benefits.

Armed with the knowledge that a career in computer engineering was far more secure and lucrative than a career in pro-gaming, while still being a career option which pandered to my passions, I decided to take a few CS courses at my local community college. Not only did I find

these courses entertaining, but I also found them easy, as though programming came naturally to me. I decided to further pursue a degree in CSC, to see where it might take me in life. I'm now married, and while that is completely unrelated to my choice of major, it has further cemented my choice. The stability that this career field offers is critical to me if I ever want to raise children in a safe and happy environment, driving them to and from school in a Tesla Model S P100D (my dream car), living somewhere in the bay area, where my wife's career path is taking her.

My interest in CSC as a major was born of a passion for logical puzzles and debugging which has been innate to my character for my entire life. It developed alongside my passion for competitive gaming, and indeed, may have been maintained throughout my adolescent life largely due in part to the latter passion. These two passions limited the scope of my career prospects to pro-gaming, pro-gaming commentating, and computer science, as I refuse to work an 8 hour shift at a job that is anything less than joyfully engaging. The final deciding factor, which would both push me into CSC and keep me pushing through my education in order to obtain my degree, is the stability which a degree in computer science offers. It is lucrative, affords job opportunities in many of the world's safest and affluent locations, and enables me to obtain all of my dreams, even those yet undreamt. If there's one thing that I know in my heart as I sail over that Golden Gate Bridge toward Alcatraz for the hundredth time, it's that I am a programmer, and I could not be happier with the path my life has taken.

Why I became a CSC major

- Logic Puzzles which I enjoy (kind of like card games *maybe?*)
- MTG
 - Sequencing
 - Resource Management
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- Lucrative
- Prior experience
- Family history with programming
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