

Arizona State University M.S. in Computer Science

The advent of computer science in the recent past has gradually become the cornerstone of technological innovation. These innovations have solidified their presence in our lives and gravitated peculiar minds like mine. My fascination for this field stems from the curiosity that was sparked during my childhood. My inquisitive nature propelled me to delve into the functioning of gadgets, especially computers. My curiosity flourished into passion when I found a heartfelt connection with technology after reading many literatures like 'The Metamorphosis of Prime Intellect,' 'Autonomous,' and 'I, Robot. Recalling an instance where I witnessed a hearing and speech-impaired person struggling with conveying their message moved me emotionally. I ruminated about how technology could be leveraged to resolve such issues. After acquiring a plethora of experience and expertise in the realm, my insatiable hunger drives me to attain proficiency in this field. Thus, I intend to pursue a **M.S. in Computer Science** degree at **Arizona State University**.

I have demonstrated immense dedication and curiosity, enriching my educational endeavors. From my early years, I cultivated a habit of solving convoluted problems by employing a logical approach. Consequently, my affinity for mathematics was amplified as it encouraged me to use critical thinking. I established my scholastic acumen by bagging numerous accolades in prestigious and acclaimed academic competitions. The robust foundation of fundamentals laid during my schooling propelled me to opt for a Bachelor of Engineering with a major in Computer Science. I delved into the intricacies of various disciplines such as programming language, data structures and algorithms, AI, ML, etc. However, my education was further augmented by the practical experiences I undertook. I embarked upon academic projects that catered to the upliftment of society. The instance that left me heartbroken also drove me towards its solution. Utilizing my proficient machine learning techniques, I built a model for American Sign Language that recognized sign language and smoothened the lives of the hearing and speech-impaired community. I used LRCN, LSTM, and YOLO models to build an NLP pipeline and data augmentation tools to prepare the data. With responsibilities come challenges, and I hit a wall while collecting data. I tackled this issue with resilience, underwent numerous surveys of images and videos, and enhanced my dataset. My remarkable efforts were recognized by the RCOEM Technology Business Incubators Foundation (TBI) and I was awarded with the Best Innovation in Information Technologies accolade. To hone my technical prowess, I worked on another couple of projects that explored the realm of deep learning, image processing, database management, and AWS.

I strengthened my foothold by commencing my industrial journey with Acemgrade as a machine Learning intern. With the confidence and knowledge acquired from my academic endeavours, I developed a utilitarian application using deep learning frameworks and LSTM. I used these technologies to dabble into the world of finance with the 'Stock market price estimation' system. Not only did I furnish my principles, but I also learned to thrive in a team environment. Subsequently, I worked autonomously on a movie recommendation system to amalgamate human psychology with deep learning frameworks and decision tree algorithms. During my next venture with Feynn Labs, I assumed dual roles of Machine Learning Intern and Market Segment Analyzer. In this capacity, I set my foot in handling real-world issues with technology and conducting intricate tea-based market analysis in India. I refined my research skills, acquired the upper hand in Python and R, and broadened my knowledge of machine learning and deep learning algorithms. My exemplary contribution was recognized with a letter of recommendation from the organization. Currently, I am engulfed in reinforcing my technical knowledge in Linux, RDBMS, and Data Structures in the Martian Program at Persistent.

Recently, I have filed two design patents related to Electronic Component Cutter & Moder bottle holder Table and presented a paper titled 'Real-time microscopic level virus detection using YOLO.'

Joining hands with Biospectronics, I developed 'Smartphone-based Portable Blood Parameter Sensing' using machine learning that determines the level of uric acid in the blood with a mere picture. To diminish the mishaps on the highway, I have worked on 'Driving Hypnosis and Drowsiness Detection on Samruddhi Mahamarg.

Additionally, empowering the underprivileged part of society by leveraging technology has always been my motive. I contributed to the burgeoning of girl child education by interning as a Machine Learning Intern and a fundraiser at the Suvidha Foundation. This fulfilling undertaking marked a desire to blend knowledge and societal issues. I addressed multiple matters that exist on various levels in society through this internship. Beyond the four walls of the classroom, I also sought delight in content writing, blogging, and communicating my ideas effectively.

I stand at a juncture where structured education has become a necessity to avoid stagnancy. Beyond professional pursuits, my curiosity is a vital factor in driving me to a master's program. **M.S. in Computer Science** degree will bestow upon me valuable insights and make me an indispensable part of the industry. My aspiration to immerse myself in research aligns with this rigorous program. I am ardently inquisitive about learning the theory of computation, analysis of algorithms, and deep learning methods in biometrics.

The USA is a global technology leader and a hub for innovation. It offers unparalleled opportunities, a diverse culture, and a platform to experiment with innovative ideas. Moreover, the US is home to numerous top universities in the world. With self-initiated intense research, I have narrowed down my choice to **Arizona State University** for its prodigious track record. My professional and academic aspirations align with the rigorous curriculum that revolves around the ongoing trends of the industry. I am fascinated by the curriculum's focus on providing hands-on practical experience under the supervision of adept professors. I am awe-struck by the laboratories equipped with cutting-edge technology, allowing me to conduct my research. The strong alumni network of the industry reflects its ability to nurture world-class intellectual minds that contribute to the growth of this sector. All these aspects make Arizona State an ideal place for me to study.

I am eager to assist **Professor Aman Arora** in his research topic - Hardware Acceleration of Machine Learning and flourish under his guidance. Being a team player, I plan to be a part of non-scholastic cultural and athletic activities. To attain mastery, I will also be looking for internship opportunities to get a taste of the international industrial experience. In the long run, I envision myself as a PhD scholar and working at a reputed organization like Open AI in their R&D division. I am thankful to the admission committee for reviewing my application and I am excited to join the upcoming batch of fall 2024 intake in **M.S. in Computer Science** degree.

Regards,
Vedant Jayant Padole