STATEMENT OF PURPOSE

I recall attending a seminar on technical advancements and experiments in Computer Technologies, which sparked my drive for technology and data. Attending this seminar was a transformative moment for me. It unveiled the immense potential of technology and data to drive innovation and solve real-world challenges. The discussions about emerging trends like AI-driven solutions, big data analytics, and cutting-edge software systems made me realize the profound impact that technological advancements could have across industries. This experience sparked a deep curiosity within me and a desire to contribute meaningfully by leveraging technology. Since then, I have actively sought opportunities to deepen my knowledge and engage in projects that merge my analytical mindset with innovative technologies, reinforcing my commitment to pursuing an MS in this field.

I got inspired by technology and wanted to join such a thriving, robust, and impactful field. These rational pursuits led me to pursue a Bachelor's in Computer Science and Engineering (Cyber Security) from Dayananda Sagar University (2021-2025). The course introduced me to Ethical Hacking, Cloud Application Development, and Cyber Forensics and Cyber Law that aided me in building a comprehensive understanding of identifying security vulnerabilities, developing robust cloud-based applications, and addressing legal aspects of cybersecurity. During my course, I engaged in various projects to apply my skills to address real-world problems. I vividly remember my first project on Securing an Online E-Voting System. It used the SHA-256 algorithm to secure the systems, targeting people who preferred casting their votes online. In this 4-member group project, I was responsible for design and cryptographic implementation phases, especially in debugging. The project was beneficial as it allowed me to gain hands-on experience in cryptographic algorithms and develop a deeper understanding of secure software design. One significant challenge we overcame was optimizing system's performance while maintaining high levels of security, which taught me how to balance efficiency with robustness in real-world applications.

Following my first project, I built a chatbot named PDF Genie, which summarized and answered any question asked from the uploaded PDF by the user, which used Large Language Model. This project was beneficial as it introduced me to the practical application of natural language processing and AI-driven automation. I tackled challenges like ensuring accurate question parsing and efficient summarization of large documents. I have also dedicated my time to case studies that involved topics like Network Anomaly Detection and iOS Operating Systems, which equipped me with the ability to analyze network behaviors, detect potential threats, and understand the intricate architecture of iOS systems. Currently, as part of a team of 4, I am working on my major project on Phishing Detection and Prevention using AI models. My role involves working on the design and initial development of AI models, identifying relevant data features, and creating robust framework for secure deployment. Although the project has not been implemented yet, it has provided me with valuable insights into machine learning techniques, data pre-processing, and cybersecurity frameworks.

During my undergraduate studies, I faced a temporary setback due to minor health issues, which unfortunately impacted my academic performance during my second year. I had a backlog in my 4th semester for the course Probability and Statistics, which I successfully cleared in the following attempt. This period taught me valuable perseverance and time management and improved my performance in subsequent semesters. I believe that my determination to overcome challenges, combined with my academic knowledge, practical experiences, and enthusiasm for Computer Science, makes me well prepared to excel in the demanding environment of your graduate program.

In addition to my formal coursework, I have been certified by the EC-Council by completing the courses Ethical Hacking Essentials and Network Defense Essentials. To strengthen my knowledge of JS, I successfully cleared the assessment and was certified by HackerRank for the course JavaScript (2023). Furthermore, Rapidminer (an ALTAIR company) certified me for courses like Applications & Use Cases

Professional Certification and Machine Learning Professional Certification. The skills I have obtained through these courses have helped me with my assignments and prepared me to tackle complex problems, apply industry-standard tools effectively, and stay updated with evolving technologies.

Apart from being proactive in the classroom, I contributed to the student-run club CySec Club as the Vice President for the club (Oct'22- Aug'24). From conducting Cyber Awareness camps at pre-university colleges and voting Awareness Camps to hosting a 24-hour hackathon, I developed my leadership and managerial skills. I also participated in the event TechNite hosted by the department (Dec'22), where I had an opportunity to explain in detail the parts of a Motherboard to the audience. Additionally, I delivered seminars and technical talks to my juniors about Cyber Awareness and career opportunities in Cyber Security. These extracurricular activities prepared me for the MS program by enhancing my leadership, communication, technical, and organizational skills.

I believe a Master's in Computer Science will help me strengthen my foundational technical knowledge and gain corporate skills to equip me for technology-driven managerial positions where I can work on scalable and innovative solutions. This course will allow me to bridge the gap between foundational knowledge and cutting-edge innovations, empowering me to contribute meaningfully to the ever-evolving tech landscape. The course will provide insights into computer science, and secure software development that align with my interests and career inspirations. Specifically, it can enhance my expertise in computer science and technology, and bridge gaps in data analysis and system architecture. The acquired skills will bring me closer to my goal of working in technology-driven managerial roles.

After completing my Master's degree, I wish to join leading firms where I can apply my acquired skills to address complex challenges and devise innovative solutions. I envision myself at Google or Microsoft working as a Software Engineer to tackle complex technical challenges. In my role, I wish to contribute to developing secure, AI-powered solutions and refine my expertise in machine learning and cybersecurity. By leveraging my skills in AI and security, I aim to drive innovative projects that address global tech challenges and set the foundation for my long-term goals. In the long term, I wish to work in technology innovation as a CTO or Entrepreneur. I aspire to contribute to creating scalable, secure systems and improve technology accessibility, thereby making a meaningful impact on society.

The University of New Haven is the appropriate platform for a Master's in Computer Science due to the structured curriculum and opportunity to study Web-Database Application Development, IOS Development, and Cryptography and Data Security that align with my objectives. The experienced faculty like Barun Chandra and Omar Hijab incline me toward the university as their expertise and groundbreaking research in Computer Science align with my academic interests. I wish to work under the guidance of professors like Alice Fischer, whose work on web based learning environment is as intriguing as its potential to revolutionize learning for students. This university's research opportunities and emphasis on innovation provide the ideal platform to refine my skills and achieve my career aspirations in technology and leadership.

My commitment, eagerness to learn, and technical knowledge will enable me to actively participate in academic discussions and contribute to my future graduate class. I desire to broaden my horizons by pursuing a Master's in Computer Science from University of New Haven. This course will build my technical expertise and passion for continuing learning and exploring evolving computer technologies.