In the bustling hallways of my secondary school, technology wielded a subtle yet profound influence, shaping our daily interactions and sparking my interest in the potential of cybersecurity. As I observed the capabilities of cutting-edge computers, envisioning a world safeguarded against digital threats and fortified with impenetrable barriers. This enchantment kindled within me a fervent passion for cybersecurity—an ever-evolving field that holds the promise of unlocking valuable insights from the vast sea of information that surrounds us. Today, as I stand on the threshold of a new academic journey, I am drawn by the boundless possibilities that cybersecurity offers for solving complex problems and driving innovation.

I completed my Bachelor of Technology in Electronics and Communication Engineering at GuruNanak Institute of Technology (GNIT) from 2017 to 2021. Being inspired and driven towards security and cyber threats, during my time at GNIT, I enhanced my studies with supplementary courses in the field, including foundational concepts of Cybersecurity on Coursera and **IAM**, **Security and Risk management** on Pluralsight. These courses equipped me with foundational knowledge in **security control frameworks**, thread modelling, supply chain risk management, machine learning, and essential programming languages, fortifying my preparation for a career in cybersecurity.

In my journey, there have been moments of recognition that stand as markers of my dedication and leadership. I'm proud to have been acknowledged for my role in delivering projects flawlessly, ensuring they met their goals without critical defects. This recognition underscores my commitment to excellence and my meticulous attention to detail. Moreover, achieving certification as an ISO 27001 Lead Implementer speaks to my expertise in ensuring information security. As the Team Lead of the Adobe-sponsored IoT club, I fostered an environment where innovation thrived, working alongside passionate individuals to explore the possibilities of IoT technology. Similarly, my time as an Event Organizer and Coordinator for E-Yentra allowed me to refine my organizational skills while creating impactful events that brought people together for meaningful conversations and collaboration.

Developed a machine learning-based face recognition system for web authentication, achieving a remarkable 95% accuracy. By integrating MTCNN detection, Facenet embeddings, and LinearSVC classification, our system demonstrated superior performance. With a dataset of 1424 images from 100 individuals, precise face localization was achieved, reaching a 98% accuracy with MTCNN. Our research also identified biases in pre-trained models, highlighting the importance of unbiased facial recognition technology. Seamless integration of our system into web-based authentication significantly enhanced usability and security, ensuring a seamless user experience.

In another project, Developed and deployed a custom Vulnerability Assessment and Prioritization Tool (VAPT) using Python, Nmap, and Nessus, achieving an average scan coverage of 80% across diverse network topologies. By seamlessly integrating with Common Vulnerabilities and Exposures (CVE) and National Vulnerability Database (NVD) repositories, we achieved a 90% matching rate between identified vulnerabilities and known exploits, enhancing risk assessment accuracy. The tool generates comprehensive reports, aiding decision-making and regulatory compliance adherence, crucial for safeguarding our digital infrastructure.  
  
I engineered a Chrome extension for real-time ASL translation during Google Meet calls, improving accessibility for hearing-impaired users. Using JavaScript and MediaPipe, the extension processed video frames to interpret ASL gestures seamlessly. I trained a machine learning model with over 90% accuracy for real-time gesture recognition and optimized data handling with MongoDB for efficient storage and transmission.  
During my tenure at Capgemini as an Analyst, I led vulnerability assessments, orchestrating comprehensive analyses of information security systems to ensure compliance with cybersecurity standards and regulations. Conducted **ISO audits** for various clients, assessing their compliance with standards, regulations, and internal policies resulting in a 30% reduction in security breaches. Performed audits to mitigate the risk of ransomware attacks and ensure the confidentiality, integrity, and availability of critical information, achieving a 95% success. Prepared detailed audit reports, including findings, recommendations, and corrective actions to ensure adherence to ISO requirements. Moreover, I spearheaded ISO audits for various clients, meticulously assessing their adherence to industry standards and internal policies. I prepared detailed audit reports, encompassing findings, recommendations, and corrective actions, to guarantee compliance with ISO requirements.  
  
During my Microsoft summer internship, I specialized in preprocessing a diverse dataset of American Sign Language (ASL) images using advanced image techniques. My primary focus was on designing a personalized configuration of CNN layers specifically tailored for image processing tasks, particularly in the context of extracting features from ASL images. By engineering and optimizing this model with techniques such as dropout regularization and hyperparameter tuning, I successfully achieved high accuracy in classification tasks.  
  
  
The decision to pursue a **Master's in Cybersecurity** represents a significant personal and professional aspiration for me. Guided by hands-on project experience, internships, and a dedicated full-time position, I view further immersion in the field of cybersecurity as the logical progression in my career trajectory. It is with great enthusiasm that I express my interest in applying for the Cybersecurity program at your esteemed university.  
  
Additionally, the reputation of the **Rochester Institute of Technology** precedes itself as one of the world's renowned institutions known for fostering innovative ideas and groundbreaking research. The course curriculum offers a blend of classroom instruction and project-based learning that will challenge me to think creatively and collaborate with equally driven peers. Access to state-of-the-art facilities like the **ESL Global Cybersecurity Institute** will be invaluable, allowing me to emerge from this program with enhanced skills and confidence in my chosen field. Moreover, the opportunity to learn from distinguished faculty members such as **Dr. Bo Yuan** and **Dr. Bill Stackpole**, whose expertise in computational intelligence, system security, and computer forensics align closely with my interests, is truly inspiring. Being part of the Rochester Institute of Technology community as a privileged student promises not only to advance my career but also to deepen my passion for academia.  
  
Undoubtedly, the United States is a center for providing excellent education, especially in advanced technological activities, which will provide me with an ideal setting to gain higher qualifications in cybersecurity. With a formal education in my field of dreams, I envision myself contributing to groundbreaking projects that transcend the boundaries of what is currently possible by working in renowned organizations such as Google, Apple, Microsoft, and Amazon.  
  
The plethora of opportunities I have had thus far to enhance my skills will be significantly furthered by the **Master's in Cybersecurity program** in **Rochester Institute of Technology** that I have chosen. The open and multicultural environment at the will help me grow exponentially in many aspects of my life, and I am equally willing to contribute my best during my candidature at the university. Therefore, I am eager to be considered for the incoming cohort of the chosen program and am grateful to the admission committee for reviewing my application.