The rapid advancement of natural language processing (NLP) has created tremendous potential for revolutionizing human-machine interaction. As someone who has been captivated by this field for a considerable time, I have devoted my academic pursuits to delving into its multifaceted aspects. I am thrilled to apply for the joint Ph.D. program in "Neurosymbolic NLP for legal applications" at IIT Kharagpur and Manchester University, as I believe this project will provide me with an exceptional opportunity to enhance my expertise in NLP and make a significant impact on the field.

Currently, I am pursuing a Pre-Doctoral program in Information Systems at the prestigious Indian Institute of Management Bangalore. This program has exposed me to critical topics such as algorithm bias, data privacy and security, and misinformation. In addition to my studies at IIM Bangalore, I am also pursuing a Post Graduate Diploma in Applied Statistics from the Indian Statistical Institute. This program has further strengthened my understanding of statistical methods and their application in research. Through coursework and hands-on experience, I have gained expertise in statistical modeling, analysis, and inference, which will be invaluable in my future research.

My passion for information technology led me to pursue my undergraduate studies in Computer Application. During this time, I worked on a project titled "Simulation of Digital Logic Gate using open-source tools," which involved developing a web-based application that teaches the fundamentals of digital electronics through hands-on lab experience in designing and implementing logic circuits. This experience sparked my interest in the intersection of computer science and education and the potential for technology to enhance learning.

After completing my undergraduate degree, I pursued a Master's in Computer Science with an institutional scholarship. I was exposed to advanced topics such as Operation Research, Artificial Intelligence, Image Processing, Network Security, Soft Computing, and more here. My coursework included a focus on neural networks and deep learning, which inspired me to explore their applications in other fields. I worked on a project titled "Vision-Based Attendance System using Deep learning Framework" that applied the deep learning framework MXNET, Keras for image processing. We used the face detection algorithm MTCNN, face recognition algorithm FaceNet and Tkinter library for the GUI development.

Subsequently, I pursued my second post-graduate degree (Master's in Technology – MTech). Here, I studied technologies that manipulate text, data, images, sound, and full-motion-video objects, cognitive psychology, and behavioral sciences. This exposed me to the need to understand and facilitate interactions between humans and machines. My interests in Multimedia Design and Human-Computer Interaction influenced my term paper, where I developed a Computer-Based Tutorial on "Set Theory" in ActionScript 3.0 (Macromedia Flash). For my thesis, I worked on "A Novel Framework for Fruit Disease Detection and Classification Using Image Analysis and ML" where I developed a framework of image segmentation using a block-based approach, which is more efficient in detecting fruit diseases that are not confined to a certain area but are present in spots. I also did an independent research project with the same professor on "Autonomous Data Digitization Using Computer Vision and Named Entity Recognition," which discussed an efficient method of information extraction leading to data digitization from PDF invoices. This method uses computer vision (OCR) to initially transform PDF or JPEG data to Raw Text Data (.TXT format), and thereafter available useful information is extracted using Named Entity Recognition (NER). I worked on a project

titled "Classification of Birds Species Using Artificial Neural Network" and developed a model to effectively classify bird species using an Artificial Neural Network by optimizing the features that obtained a good accuracy of 88.5%. This work resulted in the publication of a research paper in the International Journal for Research in Engineering Application & Management.

I am eager to continue my academic journey by pursuing a Ph.D. in Neurosymbolic NLP for legal application. This is an exciting opportunity to contribute towards developing cutting-edge technology that bridges the gap between NLP and symbolic reasoning. The project aims to integrate neuro-symbolic techniques with NLP for legal applications, enabling machines to comprehend legal language and reason about legal concepts. The goal is to create a system that can provide the public with efficient and effective legal support.

I have also had a brief stint as an assistant professor teaching RDBMS, Image processing courses, which give me first-time exposure to academia. I see my long-term career as a researcher with these research interests and guiding the future generation of students. So, upon completing my Ph.D., I want to pursue a career as an academician.