

## Statement of Purpose

*Spring Semester (Mar – Jun, 2025), TEEPxNTUST Machine Learning Laboratory*

I am writing to apply for the TEEPxNTUST Machine Learning Laboratory's Spring 2025 semester, as I am eager to deepen my understanding of Generative AI and its practical applications. My recent experiences—developing an **AI Logo Builder** using OpenAI and Gradio, and building an **e-commerce platform** with an Angular front end and a Spring Boot back end—have shaped my passion for combining AI innovations with user-friendly interfaces.

In my **AI Logo Builder** project, I leveraged OpenAI to interpret natural language inputs and generate professional, ready-to-use logos. By integrating Gradio, I created an interactive environment where users can customize designs in real time. This hands-on work exposed me to best practices in NLP, prompt engineering, and model deployment. It also reinforced the potential of AI to streamline creative processes, offering faster turnaround times and personalized results.

Additionally, my experience with an **e-commerce platform** strengthened my full-stack capabilities: I used Angular for front-end development and Spring Boot for back-end API integrations. Through this project, I learned how to build scalable systems capable of processing large volumes of data, providing secure transactions, and delivering a seamless user experience. These skills are central to my goal of building intelligent applications that address real-world challenges.

I believe TEEPxNTUST offers the ideal environment for refining and advancing these skills. By participating in the Spring 2025 program, I am particularly interested in exploring Generative AI techniques for **edge devices**, as on-device inference promises reduced latency and improved data privacy—key factors for next-generation IoT and real-time systems.

With my background in full-stack development and AI-driven projects, I am confident that I can contribute meaningfully to TEEPxNTUST's research initiatives. In return, I hope to gain valuable experience that will shape my future work in machine learning and its broad applications. Thank you for considering my application. I look forward to the possibility of joining the TEEPxNTUST community and making a positive impact in the field of Generative AI.

**Sincerely,**

**Harshith Gowda HP**

**Presidency University**