

Prince umar

September 21, 2025

Google Hiring Team

Coursera

Subject: Application for Machine Learning Scientist Intern

Dear Google Hiring Team,

I am writing to express my enthusiastic interest in the Machine Learning Scientist Intern position at Coursera. As a Computer Science student dedicated to leveraging AI for positive impact, I have long admired Coursera's mission to provide universal access to world-class learning. My hands-on experience in NLP research, particularly in developing and evaluating language models, aligns directly with your goal of building the next generation of hyper-personalized search and recommendation systems.

The responsibilities outlined in the job description resonate strongly with my work as an NLP Research Intern at IIT Delhi. In this role, I researched machine translation for low-resource languages using sequence-to-sequence models and LLMs. My work involved evaluating a range of modern architectures, including GPT, LLAMA, and Gemini, through fine-tuning and few-shot techniques. I also developed robust training pipelines and benchmarking workflows, giving me practical experience in evaluating model performance—a key responsibility you highlighted for this internship. This deep dive into the nuances of language models has prepared me to contribute to your efforts in developing context-aware recommendation engines.

My academic and personal projects further demonstrate my qualifications. I have built a solid foundation in core machine learning frameworks like PyTorch and TensorFlow, which I applied to build projects from the ground up. For instance, I trained a 30M-parameter decoder-only transformer model from scratch, giving me a fundamental understanding of the architectures that power modern NLP. Furthermore, my "Deep Researcher" project, an autonomous web research agent built with LangGraph, directly showcases my ability to develop robust information retrieval (IR) systems as mentioned in your job overview. These projects prove my capacity to transform theoretical knowledge into practical, real-world solutions.

My skills in Python, TensorFlow, and PyTorch, combined with my experience in the end-to-end machine learning lifecycle—from data ingestion with MongoDB to model deployment via FastAPI—make me confident that I can be a productive member of your cross-functional team. I am eager to apply my self-motivated and hands-on approach to help redefine the future of online learning at Coursera.

Thank you for considering my application. I have attached my resume for your review and welcome the opportunity to discuss my qualifications and how I can contribute to your team in an interview.

Sincerely,

Prince Kumar