**Jay Jajoo**

jayjajoo02@gmail.com | +1-857-351-1933 | Boston, MA

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Dear Hiring Team,

I am excited to apply for the Software Engineer Intern position at Xometry. With a robust background in data science, machine learning, and software development from Northeastern University and Vellore Institute of Technology, I am eager to contribute my skills to your innovative team. Your company's commitment to transforming manufacturing through AI-powered solutions aligns perfectly with my passion for applying advanced technology to solve real-world problems. I am particularly drawn to this opportunity to work on impactful projects that push the boundaries of manufacturing technology.

My experience as a Data Science Intern involved developing ETL pipelines, conducting exploratory data analysis, and building predictive models using Python, PyTorch, and various machine learning frameworks. Notably, I architected a neural network achieving an F1 score of 0.89 for customer conversion prediction. My recent projects include designing a scalable Retrieval-Augmented Generation (RAG) system using LangChain and LangGraph, which supports real-time web and document queries with 97% accuracy at low cost. Additionally, I developed NLP applications like spelling correction and next-word prediction with near real-time response times, demonstrating my ability to build efficient, production-quality solutions.

Currently, I am working on an anomaly detection system utilizing LSTM Autoencoders, which processes large text datasets to identify unusual patterns with high precision. This project exemplifies my capability to handle large-scale data and develop models that enhance system reliability—skills directly applicable to developing scalable software solutions at Xometry. My experience with cloud platforms like AWS, along with my strong foundation in software engineering and data processing, ensures I can contribute effectively to your team’s efforts in designing and optimizing innovative manufacturing software.

Thank you for considering my application. I am enthusiastic about the possibility of contributing to Xometry’s mission to revolutionize manufacturing through AI and software innovation. I look forward to the opportunity to discuss how my skills and experiences can support your team’s goals. I am eager to bring my problem-solving mindset and technical expertise to Xometry as an intern and help create impactful solutions.

Sincerely,

Jay Jajoo