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Dear Hiring Team,

My name is Tri Nguyen, and I'm currently in my final year of my Ph.D. program at Oregon State University working with Prof. Xiao Fu. My research focuses on developing machine learning techniques from a modeling perspective, leveraging tools such as estimation theory, optimization, and matrix factorization to design theoretically grounded solutions.

My journey into machine learning began during a three-year period working as an AI Engineer at a startup, where I became deeply involved in real-world ML systems. I gained hands-on experience with autograd frameworks like TensorFlow, PyTorch, as well as essential engineering skills/technologies such as Pandas, NumPy, Docker, object-oriented programming. That time also taught me that the success of scalable ML-based solutions requires more just good algorithms — it also depends on thoughtful data collection, pre-process pipeline, training pipeline, model evaluation, testing design, and deployment strategies.

However, I often found myself curious — and sometimes frustrated — about the theoretical principles behind the algorithms, from simple logistic regression to more complex models like RNN/LSTM. That motivated me to pursuit a Ph.D., where I've built a more rigorous understanding of the mathematical foundations of machine learning, and equipped myself with a diverse toolbox that includes estimation, optimization, and model identification.

My recent research has centered on **learning with noisy labels**, a prevalent challenge in many (weakly) supervised machine learning settings. One approach is to invest in improving label quality, which is often costly or even infeasible. A more interesting approach is to develop algorithmic solutions that make learning more robust to noisy labels. My contributions on this research area have resulted in three publications at ICML, ICLR, and NeurIPS, where we tackled noisy labels in constrained clustering and supervised learning settings.

This success has motivated me to extend this line of work to a particularly intriguing problem: **LLM alignment using human feedback**, which can be framed as a binary classification task. This view enables me to apply insights from my previous works to develop robust solutions for aligning LLMs against noisy preference data. This ongoing project has also given me valuable hands-on experience with various LLM alignment methods such as RLHF, DPO, rDPO, IPO, and SPPO.

With experience both as an engineer and a researcher, I understand the gap between theory and practice. While I'm passionate about developing principled solutions, I'm equally committed to ensure strong empirical performance — especially when working on real-world problems. I'm excited about the opportunity to contribute to your AI development efforts and bring both theoretical rigor and engineering practicality to your team.

Thank you for your time and consideration. I would be thrilled to further discuss how my background aligns with your goals.

Sincerely,
Tri Nguyen