

**Umme Athiya**

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**Hiring Manager**

**Subject:** Application for Senior AI/ML Engineer Position

Dear Hiring Manager,

I'm excited to apply for the Senior AI/ML Engineer role with **4+ years of experience** designing and deploying production-grade AI systems. I specialize in **scalable recommendation engines, LLM optimization, and real-time computer vision**—skills that align closely with your team's mission to build transformative AI solutions that bridge research and real-world impact, develop cutting-edge AI systems that solve complex business challenges and create intelligent systems that push the boundaries of what's possible with machine learning.

**What I Bring to Your Team:**

### 1. Proven AI Leadership

- Led cross-functional teams to deliver **high-impact AI products**, such as a multi-modal recommender (CLIP+BERT) that boosted engagement by **28%** and an enterprise RAG system handling **10M+ queries/day** at 92% accuracy.
- Pioneered **cost-efficient LLM deployments**, slashing inference costs by **40%** via TensorRT-LLM while maintaining **<500ms latency**—critical for real-time applications.

### 2. Full-Cycle ML Expertise

- Scaled **computer vision systems** to process **15M+ daily inferences** with **99.97% uptime**, leveraging Kubernetes and MLOps best practices.
- Automated **CI/CD pipelines** for ML models, reducing deployment time by **40%** and production incidents by **65%** through proactive drift detection.

### 3. Innovation in Generative AI

- Developed a **privacy-preserving LLM platform** (FHE + QLoRA) that enabled secure AI for **200+ enterprise users** without compromising performance.
- Fine-tuned **70B-parameter LLMs** with **8x cost reduction**, demonstrating expertise in large-scale model optimization.

### **Beyond Technical Execution:**

What excites me most is bridging the gap between cutting-edge research and business impact. For example:

- At IBM, I **translated 3 academic papers on GNNs** into production features that generated **\$800K in incremental revenue** within 6 months.
- Led an **AI ethics taskforce** that developed model cards and bias mitigation strategies now used company-wide, reducing fairness-related escalations by **65%**.
- Spearheaded **cost-benefit analyses** for AI projects, helping leadership prioritize a 70B LLM fine-tuning initiative that achieved **4x ROI**.

These experiences taught me that exceptional AI engineering requires:

- **Business acumen** to align models with organizational goals
- **Stakeholder management** to educate non-technical teams
- **Systems thinking** to anticipate downstream impacts

### **Why I'm Excited About This Opportunity**

I thrive in environments that push the boundaries of AI while solving real-world problems. My experience spans **research, engineering, and deployment**, making me uniquely equipped to contribute to your team's goals.

I'd welcome the chance to discuss how my skills can support your organization's vision. Please feel free to schedule time at your convenience via email or phone. Thank you for your consideration—I look forward to the possibility of collaborating.

Best regards,

**Umme Athiya**