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Hiring Manager
Outschool
San Francisco, CA

Dear Hiring Manager,

I am excited to apply for the Principal Engineer role at Outschool, where I can contribute to the development of your AI-powered educational assistant. With over 15 years of experience in AI, computer vision, and machine learning, coupled with a proven track record of leading 0→1 product development in fast-paced environments, I am eager to bring my expertise to pioneer new applications of AI in educational technology.

In my current role as Co-founder and Chief Technology Officer at Synthetic Intelligence Works, I lead the design and deployment of a browser-based AI pipeline that enables human-AI interaction through real-time hand gesture recognition, gaze tracking, and facial expression analysis. This project required me to think from first principles, integrating multimodal language models (e.g., CLIP, BLLP) and leveraging advanced cloud infrastructure to deliver scalable, user-centric solutions. My work has resulted in the creation of an empathetic AI avatar generation system, which adapts to user emotions and delivers personalized interactions—a testament to my ability to build innovative, high-impact AI applications.

Previously, as a Senior Research Scientist at Netflix, I spearheaded the automation of VFX workflows, reducing per-title VFX costs by 35% and cutting artist effort by 70% through the development of state-of-the-art video inpainting and segmentation algorithms. I also led the automatic creation of artwork for Netflix originals, leveraging in-stream frames to enhance viewership by 6%. These experiences have honed my ability to build scalable systems that effectively utilize rich multimedia content, a skill directly applicable to leveraging Outschool's extensive educational video and interaction data.

My technical leadership extends to mentoring teams and fostering innovation. At Ericsson, I led a team of researchers to reanimate mouth movements for dubbing using generative AI models like Stable Diffusion and GANs. This required balancing rapid iteration with scalable foundations, a challenge I am eager to tackle again at Outschool. Additionally, my experience as a Principal Research Scientist and my contributions to AI research at Columbia University and Adobe have equipped me with the technical breadth and depth to lead the development of your AI-powered assistant.

I am particularly drawn to Outschool's mission to make expert educational guidance accessible to all. My passion for AI application development, combined with my strong product intuition and user-centric approach, aligns perfectly with your vision. I am excited about the opportunity to shape the future of human-AI interaction in learning environments and to build a team of engineers focused on AI innovation.

I would welcome the opportunity to discuss how my experience and skills can contribute to Outschool's pioneering efforts in AI-powered education. Thank you for considering my application. I look forward to the possibility of working together to create transformative learning experiences.

Sincerely,
Subhabrata (Subh) Bhattacharya