## **BHAVYA SHARMA**

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Hiring Team Apple Inc.

Dear Hiring Committee,

I am excited to apply for the AIML Residency at Apple, a program that uniquely integrates domain expertise with groundbreaking machine learning and AI innovation. The residency's emphasis on creating revolutionary generative models and optimizing algorithms resonates deeply with my academic background and professional experience in data science, machine learning, and AI research.

With a strong foundation in Physics and Data Science, complemented by hands-on experience in machine learning research, I have consistently pursued projects that combine theoretical rigor with real-world impact. At IIIT Hyderabad, I contributed to developing physics-inspired generative AI models, focusing on architectural optimization for enhanced performance. My work at Spartificial included applying advanced techniques such as attention modules and multi-view fusion to improve glitch classification in gravitational wave data. These experiences have honed my ability to design and iterate on machine learning models while tackling challenging, high-dimensional data problems.

Apple's focus on multi-modal generative models aligns closely with my experience in computer vision and natural language processing. I developed lunar terrain image segmentation models using U-Net architectures and transfer learning, achieving precise image processing for astronomical applications. Similarly, my exploration of sentiment analysis and feature engineering during my externship at Beats by Dre reinforced my passion for extracting meaningful insights from diverse data modalities.

The AIML Residency's collaborative framework, opportunities for mentorship, and focus on publishing in premier academic venues are particularly compelling. My goal is to contribute to impactful research that enhances controllability and efficiency in generative models while exploring novel applications in domains such as synthetic data generation, virtual environments, and efficient training methodologies. Apple's commitment to pushing the boundaries of machine learning technology and its integration into products that reach millions inspires me to bring my skills, creativity, and determination to this role.

I am eager to collaborate with Apple's world-class researchers and contribute to solving ambitious technical problems, developing next-generation ML solutions, and advancing the field through meaningful research. I am confident that my blend of technical expertise, research acumen, and passion for innovation positions me to make a meaningful impact as part of the AIML Residency team.

Thank you for considering my application. I look forward to the opportunity to discuss how my skills and experiences align with the program's vision and Apple's mission to shape the future of machine learning.

Sincerely, Bhavya Sharma