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December 15th, 2024

Dear Hiring Team,

I am excited to apply for the Machine Learning Intern position at Generate: Biomedicines for Summer 2025. As a Ph.D. candidate in Electrical and Computer Engineering at Duke University, I have developed expertise in applying machine learning to biological systems, with a strong focus on generative modeling and interpretable AI. I am eager to contribute my skills to advance your pioneering efforts at the intersection of ML, biochemistry, and medicine.

My research spans developing interpretable machine learning models for high-impact biomedical tasks. For instance, I have built generative and predictive models for photoplethysmography signal analysis, as well as interpretable classifiers for EEG patterns. My work has resulted in multiple first-author publications in high-impact journals, including Nature Machine Intelligence and *NEJM AI*, which demonstrate my ability to tackle complex biological challenges with innovative ML solutions. Additionally, I am experienced in modern frameworks such as PyTorch and TensorFlow to design robust, reproducible models.

Generate: Biomedicines’ mission to leverage Generative Biology to design transformative medicines resonates deeply with me. I am particularly drawn to the opportunity to explore novel ML approaches for protein sequence and structure generation, applying my skills to projects that advance therapeutic discovery.

I look forward to the opportunity to discuss how my experience in machine learning research and passion for applying ML to biomedicine align with your goals. Thank you for considering my application—I am eager to contribute to your innovative team next summer.

Sincerely,

Zhicheng Guo