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Hiring Manager

Dear Hiring Manager,

I'm a computational scientist with experience developing machine learning and optimization algorithms for high-impact applications in healthcare and biology. I'm particularly interested in roles that value model interpretability, data insight, and innovation at the algorithmic level.

At Genentech, I designed machine learning workflows to predict drug treatment outcomes by integrating internal QSP (differential equation) models with multi-objective selection criteria. These models balanced competing goals like predictive accuracy, biological plausibility, and computational cost—guided by interpretability tools such as SHAP to inform decision-making and model stability.

Most recently, during my PhD research, I developed a method to predict plasmid count and spatial arrangement in bacterial genomes from short-read sequencing data, applying principles of multi-objective optimization to balance across multiple trade offs.I designed custom metrics rooted in molecular biology and leveraged graph-based algorithms—specifically a Graph Neural Network—to infer gene regulatory links from perturbation datasets, significantly improving upon rule-based approaches.

My work consistently aims to bridge scientific intuition with algorithmic structure—delivering models that are not only high-performing, but also interpretable and grounded in domain understanding.

I'd welcome the opportunity to discuss how I can contribute to your team.

Best regards,

Christian D. Basile