

**Krishna Panthi**

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Dear Hiring Manager,

I am writing to express my interest in software engineering or machine learning engineering opportunities within your organization. I hold a Bachelor's degree in Computer Engineering from Pulchowk Campus, Nepal's premier engineering institute, and am currently pursuing a Master's in Computer Science at Clemson University.

Before graduate school, I worked for three years as a software developer, building web applications and backend systems using Angular, Vue.js, .NET, GraphQL, and SQL Server. I contributed to full-stack solutions in both independent and team environments, developing scalable systems aligned with client and business goals.

At Clemson, I work as a research assistant focused on simulation modeling and AI. My current project involves extending the open source crop simulation model AquaCrop by implementing the nonlinear Richards equation to model soil water movement. I'm also developing a reinforcement learning based irrigation optimization framework using the simulator. This work integrates numerical methods, software design, and machine learning, and has enhanced my skills in algorithm development, performance tuning, and parallel computing. I routinely use Clemson's Palmetto cluster to conduct experiments on large datasets, optimizing resource utilization through multiprocessing.

I bring strong fundamentals in math and computing, hands-on experience with production software, and a deep curiosity for solving complex problems. I'm confident my blend of software engineering experience and applied machine learning research makes me a strong fit for roles across your engineering teams.

Thank you for considering my application. I would welcome the opportunity to contribute to your team.

Sincerely,

Krishna Panthi