Cover Letter - Jose Tupayachi

To Whom It May Concern,

I am excited to apply for the Summer Internship position, where I can contribute my expertise in machine learning, data analytics, and optimization while gaining valuable industry experience.

I am currently a Ph.D. candidate in Industrial and Systems Engineering at the University of Tennessee, Knoxville, focusing on developing AI-driven decision-making systems for complex operational challenges. My interdisciplinary work combines software development, data science, and optimization, enabling me to solve practical problems in freight transportation, public health, and sustainability.

My current funded projects include:

- **RECOIL Project (ARPA-E funded):** Developed digital twin models to optimize freight transportation, reducing emissions and improving network resilience.

- **SmartShots (Tennessee Department of Health):** Built a cross-platform application to increase childhood vaccination rates by leveraging real-time community health data.

- **ACTAPP (HEI-funded):** Designed a mobile app to promote physical activity among rural caregivers, addressing public health disparities.

These experiences have strengthened my skills in data analytics, AI integration, and software development, while fostering collaboration with academic, government, and industry stakeholders. My work has also been recognized with awards such as the Best Paper Award (CIE51) and the 2024 IISE DAIS Mobile App Competition.

I am eager to bring my technical expertise, problem-solving abilities, and enthusiasm to your team this summer. I welcome the opportunity to discuss how my background aligns with your organization's goals.

Thank you for considering my application.

Sincerely,
Jose Tupayachi
Ph.D. Candidate, University of Tennessee, Knoxville
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