

Md Hamidur Rahman Khan

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Electric Mobility Research Center

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RE : Application for EMRC Summer Internship Program – Md Hamidur Rahman Khan

Dear Mr. Ville Naumanen,

I'm writing to express my enthusiasm for the Summer Trainee position at EMRC. As someone deeply passionate about leveraging technology to address climate challenges, I'm inspired by your mission to decarbonize transportation through electric mobility. My background in computational engineering, hands-on experience in data-driven projects, and knack for fast learning make me a strong fit for this role.

During my studies and projects, I've gravitated toward solving problems where technology meets sustainability. For instance, while building Block Meter—a blockchain-based electricity billing system—I realized how critical transparency and efficiency are in energy systems. The project not only eliminated non-technical losses entirely but also taught me to bridge technical solutions with real-world impact, something I'd love to bring to EMRC's work.

Another highlight is Tethr, where I combined robotics and machine learning to optimize 5G tower placements. This required iterating on algorithms, troubleshooting hardware integrations, and collaborating with peers—skills I'm eager to apply to EMRC's technical research tasks, whether it's analyzing EV charging data or prototyping new mobility solutions.

My experience as a National Coach for robotics teams taught me the value of teamwork and clear communication. At Notre Dame IT Club, I designed a teaching module to simplify digital logic concepts (like flip-flops and counters) for high schoolers. Breaking down complex ideas into digestible lessons is a skill I'd happily use to support EMRC's educational outreach or event planning.

What excites me most about this role is the chance to learn from experts at the intersection of energy, mobility, and society. While I'm confident in my technical foundation (Python, C++, IoT systems), I'm equally curious about the societal and business dimensions of electric mobility. For example, how can data analysis inform policy? How do market trends shape infrastructure design? I thrive in environments where I can absorb new knowledge, and EMRC's interdisciplinary approach feels like the perfect place to grow.

I've always believed that combating climate change requires both technical ingenuity and a human-centered mindset. EMRC's focus on transforming transportation resonates with my own drive to contribute meaningfully. Whether analyzing datasets, supporting showroom development, or assisting with research, I'm ready to dive in with enthusiasm and adaptability.

Thank you for considering my application. I'd be thrilled to join a team that's shaping the future of sustainable mobility, and I'm confident my blend of technical rigor, collaborative spirit, and curiosity would add value to your mission. I'd welcome the chance to discuss how I can contribute!

I look forward to the possibility of contributing to and growing with LUT University this summer.

Sincerely,

Md Hamidur Rahman Khan