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Admissions Committee
Summer@EPFL Program,
École Polytechnique Fédérale de Lausanne (EPFL)

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Dear Members of the Admissions Committee,

I am writing to express my keen interest in joining the Summer@EPFL program and contributing to cutting-edge research at one of the world's leading academic institutions. As a senior undergraduate at the University of Delhi's Cluster Innovation Centre, pursuing a B.Tech in Information Technology and Mathematical Innovation (CGPA: 9.38/10), I have cultivated a strong foundation in scalable data management, advanced computing systems, and interdisciplinary problem-solving. The research conducted at EPFL, particularly in the labs led by Professors Karl Aberer, Anastasia Ailamaki, and Pierre Dillenbourg, aligns closely with my academic background and aspirations. My experience in managing large datasets, developing scalable systems, and applying data-driven methods to real-world challenges has prepared me to contribute meaningfully to the innovative work at EPFL.

Interest in Professor Karl Aberer's Lab

Professor Aberer's focus on transforming unstructured and heterogeneous data into reliable and actionable information resonates deeply with my experience during my Outreachy internship at Wikimedia Foundation. There, I optimized data warehousing for 1.6 million rows of machine translation data, ensuring accurate representation of smaller Wikipedia versions. Similarly, my research into translation imbalances leveraged FAIR principles to ensure data credibility and accessibility, akin to the trust and credibility assessments conducted in Professor Aberer's lab. My work on Dhamni, a scalable blood donation platform, further reflects my ability to integrate user-centric design with machine learning principles, aligning with the lab's efforts to combine human knowledge with state-of-the-art computational methods. I am eager to apply these skills to tackle challenges in information retrieval and knowledge integration.

Interest in Professor Anastasia Ailamaki's DIAS Lab

Professor Ailamaki's research on adapting data management to emerging computational architectures and automating data-intensive scientific workflows aligns with my tenure at the Integrated Media System Centre, USC. There, I developed a Python-based toolkit for wearable health devices, reducing data collection times by 50 %, and generated synthetic datasets for testing, ensuring scalability and HIPAA compliance.

I am particularly inspired by DIAS Lab's focus on enabling discoveries in scientific domains through optimized database design. My work with PostgreSQL and Docker to streamline healthcare research workflows mirrors the lab's emphasis on computationally demanding applications, and I am excited by the prospect of contributing to innovations in large-scale data repositories.

Interest in Professor Pierre Dillenbourg's CHILI Lab

As someone passionate about digital education and interactive learning systems, Professor Dillenbourg's focus on novel interfaces for collaborative learning resonates strongly with me. Leading the development of Curio, a multilingual dubbing platform that improved accessibility for diverse YouTube audiences, I have firsthand experience in designing tools that bridge linguistic and educational gaps.

My efforts in creating secure, interactive platforms such as Dhamni, combined with a strong foundation in HCI and UX design, position me well to contribute to CHILI's projects. The lab's integration of robotics and dual eye-tracking methods is particularly intriguing, and I am excited to bring my expertise to explore practical applications in team learning and interaction analysis.

Why Summer@EPFL?

EPFL's interdisciplinary environment and emphasis on real-world impact make it an ideal setting for me to expand my academic and professional horizons. With a proven track record of managing data-intensive projects and contributing to open-source communities, I am confident in my ability to contribute to the program's collaborative and innovative culture.

I am enthusiastic about the opportunity to work with world-renowned researchers, leveraging my background to tackle pressing challenges in data management, education, and visual computing. Beyond contributing to ongoing projects, I hope to gain invaluable mentorship and insights that will shape my future endeavors in academia and industry.

Thank you for considering my application. I look forward to the possibility of contributing to and learning from the vibrant research community at EPFL.

Abhishek Bhardwaj