

Dear EPFL Research Internship Selection Committee,

I am writing to express my enthusiastic interest in pursuing a research internship at École Polytechnique Fédérale de Lausanne (EPFL), a world-renowned institution for scientific and technological research. As a highly motivated and passionate student in computer science and cyber security engineering, I am eager to contribute to the cutting-edge research endeavors at EPFL and gain invaluable hands-on experience in a world-class research environment.

My fascination with computer science and cyber security engineering stems from their profound impact on society and their potential to revolutionize various aspects of our lives. I am particularly drawn to the theoretical and practical aspects of these fields, continuously seeking opportunities to delve deeper into their intricacies and expand my knowledge base. Throughout my academic journey, I have actively participated in research projects and coursework that have allowed me to develop a solid foundation in relevant skills and expertise.

My primary research interests lie in Algorithms & Theoretical Computer Science, Artificial Intelligence & Machine Learning, and Data Management & Information Retrieval. These fields align with the pioneering work of Professor Martin Jaggi, whose research in optimization and machine learning has been instrumental in shaping my understanding of the field. Professor Jaggi's expertise in optimization algorithms and techniques particularly resonates with my interest in developing efficient and scalable solutions for complex optimization problems. I am confident that my involvement in Professor Jaggi's research projects would provide me with the opportunity to apply my theoretical knowledge and programming skills to address real-world challenges in optimization and machine learning.

In addition to my fascination with Professor Jaggi's research, I am also drawn to the work of Professor Patrick Thiran, whose expertise in networking and distributed systems aligns with my own interests in cyber security. Professor Thiran's research on network security and distributed systems has been instrumental in shaping my understanding of the vulnerabilities and challenges faced by modern networks. I am particularly interested in Professor Thiran's work on decentralized consensus protocols and Byzantine Fault Tolerance (BFT), as these concepts are crucial for developing secure and reliable distributed systems. I believe that my involvement in Professor Thiran's research projects would provide me with the opportunity to apply my knowledge of network security and distributed systems to develop innovative solutions for protecting critical infrastructure and ensuring data integrity.

My professional experience further complements my academic background and research interests. During my Python Developer internship at Intra Institutional Internship, Bengaluru, I was involved in developing functional applications showcasing Python's versatility. This experience honed my programming skills and problem-solving abilities, enabling me to tackle complex programming tasks effectively. Additionally, my Full Stack Developer Summer Internship at CAPABL (Formerly Elite Techno Groups), Bengaluru, provided me with hands-on experience in Java and Python, further expanding my programming expertise. Furthermore, my Cyber Security Internship at Senselearner Technologies Pvt. Ltd, Dehradun, allowed me to actively engage in weekly cyber security challenges and apply problem-solving skills to identify vulnerabilities and develop solutions. This experience solidified my understanding of cyber security principles and practices.

My relevant skills and experience include:

- Programming Languages: C++/C (Advanced), Python (Intermediate), JavaScript (Advanced), Java (Intermediate)
- Frameworks: HTML5, CSS3 (Advanced), Nodejs (Intermediate), React (Advanced), MySQL (Intermediate), MongoDB (Advanced)
- Design: Figma (Advanced), AdobeXD (Advanced), Adobe Illustrator (Advanced)

I am confident that my strong academic background, unwavering dedication to research, and eagerness to learn make me an ideal candidate for the EPFL research internship program. I am eager to immerse myself in the stimulating research environment at EPFL and contribute my skills and enthusiasm to the pursuit of groundbreaking discoveries. I am particularly interested in collaborating with Professor Martin Jaggi and Professor Patrick Thiran, as their research aligns closely with my own aspirations. I believe that my involvement in their research projects would provide me with the opportunity to make significant contributions to the field of computer science and cyber security engineering.

Thank you for considering my application. I look forward to the opportunity to discuss my qualifications and research interests in more detail.

Sincerely,

Anu S M