

Omar Ahmed Mohamed  
Software Biomedical Engineering Student  
Cairo University  
Email: omarref3at2031@gmail.com  
Phone: +201156228722  
Date: 08-11-2024

Admissions Committee  
École Polytechnique Fédérale de Lausanne (EPFL)  
Switzerland

Dear Members of the Admissions Committee,

I am writing to express my strong interest in the Summer Internship in Artificial Intelligence at EPFL. As a third-year undergraduate in Software Biomedical Engineering at Cairo University, I am eager to apply my growing knowledge in AI and machine learning within a research-driven environment renowned for technological innovation. EPFL's cutting-edge facilities and expertise in AI applications align closely with my professional aspirations, and I am excited about the potential to contribute to ongoing research efforts while advancing my technical and analytical skills.

During my academic journey, I have built a strong foundation in AI and machine learning, complemented by hands-on experience through projects and internships. One of my notable projects involved developing a full-stack application using Flask and PostgreSQL, where I applied machine learning to provide users with personalized recommendations based on behavioral data. This experience sparked my interest in applying AI to create solutions that can adapt and respond to complex, real-world challenges.

My technical toolkit includes Python, Java, and frameworks like TensorFlow and PyTorch, which I have used extensively for building, training, and optimizing neural network models. Additionally, I have gained foundational experience in cloud computing with AWS and Azure, enabling me to work effectively with large-scale datasets and distributed systems. I am also highly proficient in data analysis, having worked with libraries like NumPy, Pandas, and Scikit-learn to extract insights from diverse datasets, which I believe will be invaluable to the data-driven approach of your research initiatives.

My recent internship as a backend developer at Lab Digital Systems involved significant work with data management, APIs, and MongoDB. I was responsible for handling sensitive medical data, where I implemented security protocols and optimized data pipelines, ultimately achieving a 30% improvement in system performance. This experience has prepared me to navigate the ethical and technical challenges often encountered in AI, especially in high-stakes fields like healthcare.

A summer internship at EPFL would provide an ideal platform for me to deepen my understanding of AI, contribute to meaningful research, and work alongside esteemed experts and like-minded peers. I am particularly drawn to EPFL's emphasis on interdisciplinary collaboration, as I believe that merging AI with fields like healthcare and biomedical engineering holds transformative potential. I am confident that my technical proficiency, research enthusiasm, and commitment to innovation will allow me to make a valuable contribution to your team.

Thank you for considering my application. I am looking forward to the opportunity to contribute to EPFL's inspiring projects and further my skills in artificial intelligence. Please do not hesitate to contact me if you need any additional information.

Yours sincerely,  
Omar Ahmed Mohamed