STATEMENT OF PURPOSE

My interest in Artificial Intelligence (AI) dates back to 2014, when I was transitioning into the 7th grade at my middle school, Shree Niketan Patasala, where a Robotics Camp was organized as part of a summer program. During this camp, a team of experts conducted a two-day hands-on workshop titled ‘Develop your own robot.’ As a team of four, we built a simple RC Rover, and I was introduced to the idea of automating tasks that eventually lead to the domain of Artificial Intelligence. That brief encounter with AI ignited a spark within me, and in 2019, I further explored this fascination by demonstrating a rover controlled by keystrokes using Arduino UNO at the annual science exhibition held during my 11th grade at my high school, Ebenezer Marcus International School. My unwavering curiosity led me to pursue a Bachelor of Technology in Artificial Intelligence and Data Science at Sri Venkateswara College of Engineering (SVCE), where I could channel my passion into a formal academic pursuit. My commitment to the field was recognized with a CGPA of 9.1 and the “Budding Bright Engineer Award,” a distinction given to only 2 out of 240 students in the Department of Computer Science and Engineering, highlighting my dedication and accomplishments. This recognition was a testament to my hard work and further fueled my determination to excel in the AI domain.

Throughout my undergraduate studies, I continued to push the boundaries of my knowledge in AI. The first 3 semesters of my coursework were conducted online due to the COVID-19 pandemic, which allowed me ample time to explore the field independently and build a solid foundation in AI and Data Science. During this period, I engaged in competitive programming, which helped refine my problem-solving skills and provided me with practical experience. A pivotal moment came in November 2020, when I participated in my first hackathon, HackSRM 3.0. This experience proved to be transformative, as it enabled me to collaborate with like-minded peers. Since then, I have actively participated in over ten hackathons, securing victories in several. My academic journey also included delivering a guest lecture on AI at my alma mater, Carmel Public School, which allowed me to share my insights and inspire others while reinforcing my own understanding of the field.

Over the past few years, I have developed a strong interest in three specific AI niches: Robotics AI, Automotive AI, and Medical AI. One of my notable projects in this domain was ACCICARE, a prototype designed to mitigate accidents. As a team of 5, we developed this during a 72-hour hackathon at PSG Coimbatore, where our team earned the 1st Runner-Up position and a cash prize of INR 75,000. This project, which involves a camera and mic module placed near the vehicle's rear-view mirror to monitor the driver’s real-time state and autonomously notify nearby hospitals, solidified my passion for applying AI to real-world challenges, particularly in the automotive sector. Additionally, my research paper on “Chronic Obstructive Pulmonary Disease (COPD) Severity Analysis using Lung Sound,” published in IEEE, explored innovative applications of AI in healthcare, further demonstrating my commitment to advancing the field. Recently, I have delved into generative AI, working on projects leveraging open-source LLMs from Hugging Face using the LangChain framework at my current firm, Samco Securities Ltd., and during my internship at Mocero Health Solutions. These projects have not only refined my technical skills but also deepened my understanding of AI’s potential to address complex problems.

Recently, I ventured into the intersection of cognitive neuroscience and AI, developing an idea to manipulate human memory and emotions using invasive methods such as Intracortical Microelectrode techniques and Electrocorticography (ECoG). This innovative approach involves placing minute electrodes on the cortex to capture realistic signals from the brain's gray matter, responsible for processing information, emotions, and memories. This project has opened new avenues for my research interests, blending AI with neuroscience to create impactful solutions. The culmination of my experiences, including extensive hackathon participation, academic achievements, and research endeavors, has reinforced my aspiration to contribute to the field of AI and robotics. I am eager to pursue further studies to deepen my expertise and make meaningful advancements in these exciting areas.

Germany has long been renowned for its rigorous academic standards and innovative research, making it an ideal destination for pursuing advanced studies in Artificial Intelligence. The country’s commitment to research and development in AI, coupled with its strong emphasis on practical applications, aligns perfectly with my career goals. German universities are celebrated for their cutting-edge technology and state-of-the-art facilities, providing an environment conducive to both theoretical learning and hands-on experience. Moreover, the opportunity to study in a country known for its rich history of engineering and technology further enhances my ambition to contribute to the field of AI. The multicultural environment and the chance to collaborate with international peers and experts are additional factors that make Germany an attractive choice for my academic and professional growth.

The University of Passau’s MS in Artificial Intelligence Engineering program stands out for its focus on interdisciplinary research and practical applications. I am particularly impressed by its emphasis on Trustworthy AI and computational linguistics, which resonates with my IEEE-published work on medical AI and my innovative ideas on memory manipulation using techniques like Intracortical Microelectrodes and ECoG. These areas align with my goal to merge cognitive neuroscience with artificial intelligence to create transformative solutions. Passau’s AI Transfer Center and its strong collaboration with industry provide an exceptional platform to bridge my academic pursuits with impactful real-world applications, making it the ideal environment for my research ambitions.

Germany’s strategic focus on sustainability and ethics in AI, coupled with the University of Passau’s dedication to fostering innovation, provides a compelling reason to pursue my master’s here. The AI Strategy 2025 and the country’s leading role in engineering and technology are unmatched globally, offering a robust ecosystem for students and researchers. Passau’s integration of cognitive science, data engineering, and its emphasis on explainable AI perfectly align with my vision of contributing to advancements in Automotive AI and Medical AI.

In summary, my journey from early curiosity in AI to my current achievements in the field reflects a deep-seated passion for advancing technology and solving real-world problems. With a strong academic foundation, proven experience in competitive environments, and a commitment to pushing the boundaries of AI, I am eager to contribute to and benefit from the vibrant academic community in Germany. I am confident that pursuing my Master’s degree in Germany will provide me with the expertise, exposure, and opportunities necessary to achieve my career aspirations and make meaningful contributions to the field of Artificial Intelligence.