STATEMENT OF PURPOSE

My fascination with how machines can learn and solve problems like humans has been a constant thread throughout my undergraduate studies in Computer Engineering. This curiosity is what compels me to write this statement of purpose, outlining my strong desire to pursue a Master of Science in Artificial Intelligence and Data Science at Heinrich Heine University Düsseldorf.

My academic journey began with a strong foundation in science and mathematics during my secondary education (Central Board of Secondary Education, Delhi) where I achieved a CGPA of 9.8 (German equivalent: 1.10). This interest in these core subjects continued through my higher secondary education (Maharashtra State Board of Secondary and Higher Secondary Education, Pune) where I obtained 79.38% (German equivalent: 1.95). Building upon this base, I pursued a Bachelor of Technology (B.Tech.) in Computer Engineering at Vishwakarma Institute of Technology, Pune (affiliated with Savitribai Phule Pune University) from July 2017 to June 2021. Throughout this program, I excelled in my studies, graduating with a CGPA of 9.19 (German equivalent: 1.41). The curriculum provided a comprehensive understanding of computer hardware and software. I further enriched my practical experience through an Industrial Internship. Furthermore, my passion for the field is demonstrated by my recent publication titled "Autonomous Car Simulation using Soft Computing" in the IJSREM Journal.

Since July 2021, I've been gaining valuable professional experience as a Software Engineering Associate at Siemens Industry Software (India) Pvt. Ltd. There, I contribute to the development of Teamcenter, a product lifecycle management tool, and its client application, ActiveWorkspace. My role involves web development, utilizing C++ for the backend and the Siemens Web Framework (built on React JS) for the frontend. Prior to this, I interned at the same company as a Graduate Engineering Trainee from January to June 2021. In this role, I focused on Test Enumeration using the Selenium Cucumber framework. This involved testing existing functionalities, planning improvements for overall test coverage, and optimizing long-running tests through refactoring. Beyond formal education, I've actively expanded my technical knowledge through online courses and certifications. Additionally, I've completed online non-credit courses from DeepLearning.AI and Coursera and Structuring Machine Learning Projects. Finally, I successfully passed the Problem Solving (Basic) assessment on HackerRank in September 2020.

My desire to pursue a Master's in Artificial Intelligence and Data Science stems from my undergraduate studies in Computer Engineering, where I was particularly drawn to courses like Artificial Intelligence and Cloud Computing. This fascination with intelligent systems and their ability to analyze data has fueled my interest in delving deeper into this field. This program's focus on machine learning, deep learning, and big data analytics aligns perfectly with my aspirations to develop a specialized skillset applicable to real-world challenges. The program's learning outcomes, including expertise in data modeling, algorithm design, and data visualization, will equip me for success in high-demand careers like Machine Learning Engineer or Data Scientist at innovative organizations like Siemens or Tesla, where I can leverage AI and data science to solve complex problems and contribute to cutting-edge advancements.

Heinrich Heine University Düsseldorf (HHU) stands out for several reasons. Firstly, HHU's strong reputation for research in artificial intelligence and data science perfectly aligns with my academic goals. The presence of collaborative research centers fosters an environment of innovation and exploration, which is crucial for my development as a researcher. Secondly, HHU's compact campus creates a close-knit learning community, allowing for personalized attention and interaction with professors – a factor I highly value. Finally, the university's focus on interdisciplinary learning resonates with my desire to approach AI and data science from multiple perspectives.

Germany's position as a global leader in engineering and technology makes it an ideal place to pursue my Master's degree. The country's thriving tech industry offers ample opportunities for practical experience and future employment. Furthermore, Germany's emphasis on research and development fosters a culture of continuous learning and innovation, which aligns perfectly with my own aspirations. Additionally, Germany's rich history and cultural significance make it an exciting place to live and study, allowing me to broaden my horizons beyond academics.

Following are the reasons why I chose HHU for my Masters:

- HHU's program emphasizes the theoretical foundations of AI and Data Science, ensuring I build a strong understanding before tackling real-world applications.
- The program offers specialized lectures in areas like natural language processing and computer vision.
- The program's core curriculum centers on machine learning and deep learning, with a strong focus on deep learning.

My qualifications align perfectly with your program. Thank you for your time and consideration!

Regards,

Aman