

# STATEMENT OF PURPOSE

My name is **Parth Aggarwal** from Delhi, India. I have an Indian passport number **XXX**.

I am writing this letter to request the visa officials to kindly issue my student visa to Germany as I have secured admission at **RPTU Kaiserslautern Landau for Masters in Computer Science** which is starting on **xxx** and have practical exposure by working with companies' technical teams. I have already paid the one year tuition fee of **XXX**.

I have worked very hard throughout my school years and my education learning experience has been characterized by lots of challenges as well as achievements. I passed my 10th standard in the year 2018 from the CENTRAL BOARD OF SECONDARY EDUCATION (CBSE), INDIA with 89.4%. This was then complemented by my Senior School Certificate Examinations (SSCE/12th standard) which I completed in the year 2020 and scored a grade of 91.6%.

In the academic year 2020, I joined **Bennett University situated in Greater Noida, Uttar Pradesh, India and enrolled for B. Tech, in Computer Science and Engineering which I am currently pursuing**. In my entire undergraduate program, I was able to score high integrity in my academic affiliations securing me a CGPA of 9.22 in the seventh semester. In my coursework, I opted for subjects like Computational Thinking & Programming, Data Analysis Using Python, Software Engineering and Competitive Programming to gain a good understanding of the computer science course direction. In order to prove my language proficiency, I appeared for the **IELTS** examination and my overall band was 8.0.

I enriched academic knowledge through interning in a number of companies. At the **Digital Union of Commerce and Industry Limited**, I worked as a **Full Stack Developer Intern** from January 2023 to June 2023 during which I built web applications, developed the look and feel of web applications, and debugged possible problems. After that, I was employed at **AV Techfin as a Data Analyst Intern** between June 2023 and November 2023. This internship helped in sharpen my analytical skills and knowledge regarding data analysis and decision-making processes. From November 2023 - June 2024, I worked at **Envfy Services Private Limited as a Sustainable Business Development Executive**. This role has widened my horizon on sustainable business and management of projects.

Some of the technical skills that I possess include programming languages and frames like Flutter, Python, Java, R SQL and Firebase. They have enabled me to apply effective solutions in my academic projects and internships and the development of new ideas.

Other than the years of learning, I have participated in several co-curricular activities. I was a core member of the Pulse club at Bennett University holding commendable work in the session 2022-2023 academic year. I also held the position of a member of the creative core team in the CSI Research Society from February to July 2021. Besides, for the last one year, I have been volunteering with one of the NGO's named Nari Shakti Morcha and working to create awareness regarding menstrual hygiene. All these activities have been very beneficial to me in developing spiritually, enhancing my leadership abilities, and promoting my advocacy for various courses.

## Why This Course

The reason for opting for the Master's Program in Computer Science is due to the commitment to the field and the need to learn upgraded information within the discipline. The curriculum of RPTU is perfectly suitable for me since it provides courses and research activities that will improve my technical competencies and problem-solvers profile.

Moving to the learning outcomes which I will gain from this course-

- I will delve into the theoretical basics of computation to understand the capabilities and limitations of abstract machines. Acquiring this information will allow me to effectively address intricate computational problems and create innovative algorithms.
- I will also be obtaining automated techniques for logical reasoning, aiding in the quick resolution of complex issues. This skill will prove valuable in fields such as artificial intelligence, theorem proving, and software verification.
- I will develop skills to improve systems with competing objectives, balancing trade-offs to reach Pareto-optimal solutions that will enhance my decision-making across various domains by considering multiple criteria simultaneously.
- By mastering the principles of functional programming, I will be able to ensure the accuracy of my code. This will improve my capability to create dependable and error-free software, which is crucial in mission-critical systems and applications.
- I will learn about numerical methods to solve ordinary and partial differential equations, acquiring practical skills to model physical phenomena. This knowledge is crucial for scientific computing, engineering, and computational physics, allowing me to simulate and analyze real-world systems.
- I will understand concurrent systems and master methods to guarantee their accuracy and speed. This expertise will help me create adaptable and quick software systems, crucial in today's distributed computing settings.
- Studying dynamical systems will help me understand their stability, chaos, and bifurcations. This knowledge is crucial in various fields like physics, biology, and economics, as it offers valuable insights into the behavior of complex systems.

## Modules of the course:

**Computer Science Theory:** Graphs and Algorithms, Verified Functional Program, Concurrency Theory, Advanced Automata Theory, Complexity Theory, Automated Reasoning, Verification of Reactive Systems, Machine Learning I - Theoretical Foundations

**Formal Fundamentals:** Algebra, Mathematical Modelling, Analysis, Electrical Engineering, Mechanical Engineering

**Any 2 specializations from below:**

Specialization - Algorithms and Deduction, Embedded Systems, Information Systems, Intelligent Systems, Distributed and Networked systems, Software Engineering, Visualization and Scientific Computing, Data Science

## Scope of the Course

Upon finishing the course from this university, my aspiration is to become a Systems Security Analyst. In this role, I will be responsible for implementing security measures, monitoring systems for any suspicious activities, and conducting regular security audits to ensure the integrity and confidentiality of data.

## Why Germany

Germany is well-known for its educational programs for students all over the world; it is famous for its universities specializing in engineering and technology; looking at the German educational system and comparing it to my dreams of becoming a computer scientist, I can conclude that the country is ideally suited for me. The government's dedication to enhancing the production of research and innovation is also apparent from the existence of outstanding universities and research institutions in the country. The country has many technology clusters and innovation regions beginning from the famous 'Silicon Allee' in Berlin to the technologies and high-tech hub of Munich.

Another reason to choose Germany for my higher education is that it has a diverse community with different cultures from around the world, which creates a multicultural atmosphere. It gives us the opportunity to learn about various cultures and traditions, providing me with international exposure. German universities consistently rank highly on global university tables, with several institutions among the top worldwide.

## Why This College

I have chosen RPTU University of Kaiserslautern-Landau as my preferred university due to its curriculum which was offered to the students included both fresh and detailed material so the students would receive maximal knowledge about the subject. It is known for its highly qualified professors and researchers who, in their teaching, make use of up-to-date knowledge, acquired by them in their numerous practical projects, allowing the students to work under the guidance of the best specialists in their field.

The university provides a challenging study environment aimed at equipping students with solutions for future challenges. The university's strong emphasis on practical skills and industry-relevant education, supported by its robust industry links, reassures me that I will receive a comprehensive and applicable education.

The affiliation with various IT majors and research organizations offers internships, project work and interfaces for students to establish connections and gain working experience with reputed organizations. In addition, RPTU's mission to create a nurturing environment for all learners guarantees such students support to accomplish their dreams. Thus, selecting RPTU as my Master's Program in Computer Science is to become a part of a progressive academic society that strives for success as well as promotes changes for the better in the sphere of IT. I am looking forward to studying with superb professors, doing research for great discoveries, and working with brilliant students from all over the world.

## Future Goals

After finishing the Master's Program in Computer Science at RPTU, I want to work in one of the major software companies, such as **Google, Microsoft, or Amazon** as a Senior Software Engineer. Ideally, I plan on using the mastery I will gain to initiate change, create enviable solutions and help in the acceleration of innovations in technology.

## Financials:

To stay in Germany for my studies, I have all my financials intact. I have my bank statement with a closing balance of xxx, a Blocked Account with a corpus of xxx for a year, property evaluation worth xxx and Liquid funds aggregating to xxx. I believe these funds are enough to carry out my expenses during my stay in Germany.

**Lastly, I would like to thank you for considering my application and I hope to hear a positive response from your end.**

**Sincerely**

**Parth Aggarwal**