

Hello, I'm Kunal Ghosh, and I believe I could be an ideal candidate for the Simulation Engineer role at Siemens. I'm currently pursuing a master's in Aerospace Engineering at the Indian Institute of Science, Bengaluru. In addition to that, I hold a bachelor's in Aerospace Engineering from the Indian Institute of Engineering Science and Technology, Shibpur. My academic journey, research endeavours, and internships have ignited my passion for the limitless possibilities within computational and data sciences. As a relentless innovator, my profound understanding of numerical simulations and computational fluid dynamics aligns with Siemens' groundbreaking work on data-driven CFD solvers. However, I'm not just looking to fit the role-I aspire to redefine it.

In an era defined by data, I'm committed to transforming information into actionable insights, and I've demonstrated this commitment through my academic journey. The intricate equations of my Aerospace Engineering studies served as the launching pad for my fascination with computational and data sciences. My M.Tech thesis, 'Machine Learning for Mesh Adaptation in CFD Simulations,' and my B.Tech thesis, 'Numerical Study of a Flapping Wing Flight', honed my analytical skills, problem-solving abilities, and technical expertise in CFD.

My academic journey has been enriched by two intriguing research papers. First, 'CFD Analysis of Butterfly-Type Ornithopters' takes you on a journey through the intricate computational analysis of butterfly-like ornithopters. It unravels the mysteries of their wing movements, almost as if we were deciphering the secrets of nature's own flying machines.

In a parallel exploration, 'Numerical Analysis of Three-Dimensional Aerodynamics in Thrush Nightingales' delves into the fascinating world of avian aerodynamics. This research raises compelling questions and opens doors to uncharted territories at the captivating interface of nature and engineering. These academic endeavours have ignited my curiosity and passion for exploring the mysteries of the natural world and translating them into engineering solutions.

My curiosity and innovation didn't stop at the classroom door. Internships have allowed me to bridge theory and practice, making me well-prepared for the demands of the Simulation Engineer role at Siemens. As a Technical Intern at Siemens, I actively contributed to the project 'Towards development of an accelerated framework to solve complex reacting flows'. My tenure as a Research Intern at IIT Kanpur dived into the intriguing realm of 'Study of flow of supersonic jet over a corrugated wall using CFD'. These hands-on experiences enriched my understanding of real-world CFD challenges.

But what sets me apart is my relentless pursuit of innovation. My M.Tech semester project, 'Time Series Forecasting for Epidemic Prediction using PINN and LSTM', symbolizes this commitment. I compared the performance of LSTM and PINN networks on a time-series dataset, leaving no stone unturned. This wasn't an academic exercise; it was a glimpse into the future of data-driven simulations. Siemens' endeavours in developing data-driven CFD solvers align perfectly with my commitment to innovation. I'm here not just to contribute but to pioneer the next chapter in this dynamic field.

In conclusion, my journey has been defined by the relentless drive for innovation and the unwavering commitment to excellence. I believe I'm not just prepared for the Simulation Engineer role; I am engineered for it. I'm not just applying for a job; I'm applying to be part of a transformational journey at Siemens. Let's

embark on this journey together and rewrite the future of simulation engineering, shaping a world where data-driven simulations lead us into new frontiers.

Thank you for taking the time to consider my application.