

Statement of Purpose

Data Science is certainly scripting a transformation in the computing world and as a researcher in the TCS research lab, I find myself inextricably attracted towards this exciting domain. Striving for excellence has been a central motif in my life and my academic orientation is testimony to the fact. From winning several state level Mathematics and Science competitions, to receiving the highly prestigious Indira Award for excellent academic achievement in high school, constant learning and growth are a source of motivation for me.

The seeds of my interest in data science were laid during my internship in Nucleus Software Ltd. during my B.Tech program at IIT, Delhi. My project saw me test and hone my programming skills by developing models of several standard algorithms like KNN, Decision trees, Bayesian Classifier, ada boosting ensembler and SVN. The B.Tech program has laid a sound foundation of Machine Learning, Image Analysis, Linear Algebra, Cryptography, Logics for Computer Science, Probability and Statistics apart from practical skills in Machine Learning, Deep RL Robotics, Probabilistic models, Image Processing, Python, C++ and OOP. During my under graduation, I immersed myself in various projects and research work, interning with Adobe Systems and The Indian Statistical Institute to work at the intersection of cryptography and machine learning by applying Machine Learning operations on encrypted data. My greatest learning was perhaps my internship at Adobe, where I used machine-learning skills in real world industry applications. The unparalleled sense of achievement on developing a smart feature called Video to Collage that could extract beautiful candid frames from an iPhone shot video to enable share, edit or collages from those extracted frames ignited the desire to develop something of value. As a Researcher in the Research & Innovation Labs, TATA Consultancy Services, I got the opportunity to implement Visual Servoing on UR5 Robot in simulation as well as real world in eye-in-hand configuration with six degrees of freedom. The proudest moment of my career was when the project using Deep Deterministic Policy Gradient Algorithm and gazebo simulator was submitted for publication in IEEE Winter Conference on Applications of Computer Vision, 2019.

At this juncture in my professional and academic journey, my keen interest in data science and the desire to enhance my professional skills and knowledge prompted me to pursue a Masters in Analytics from ETH. I am confident that this innovative program will empower me with the requisite skill set to fuel my metamorphosis into a Data science professional. I look forward to exploring Data mining, Data Visualization, Cloud Computing and Stochastic processes under the impeccable guidance of experts like Prof Andreas Krause. I am confident that the state-of-the-art facilities, cutting-edge curriculum and opportunities for experiential learning at the University will equip me to delve deeper into the vast spectrum of data science. Given my engineering background, academic orientation and scientific

temper, coupled with hands-on experience in research and development, I believe I am more than ready to meet the requirements of this challenging and avant-garde program. It will indeed be an honor and the fulfillment of a long cherished dream to be a part of your prestigious university, giving flight to my lofty ambitions of a fulfilling career in Data Science and research.