Sample Masters SOPs (Statement of Purpose) - by Academy One www.academyone.net

Sample 1 – MS in Computer Science Applicant

When I started my professional career as an intern at ___, automating applications was a daunting yet exciting task. As time went by, I gradually became better at it and my firm hired me as a full-time employee. Automation has without a doubt improved the efficiency of testing, which otherwise would have consumed a significant amount of tester's time. While many applications have their own peculiarities with regards to their functionality and technicality, and automating them has had its own set of challenges, I believe that applying concepts in Machine Learning and Artificial Intelligence could simplify things significantly. Analyzing historical data, and identifying data patterns would help in effectively formulating test scenarios, and this one of the applications of Machine Learning and AI that I am interested in. This has inspired me to advance my learning in these areas; I thus want to pursue a Graduate Degree in Computer Science at _____.

During my undergrad, amongst all the courses that I studied, I was most interested in Data Structures, Neural Networks, and Data Warehouse and Mining as I could directly relate to the applications of these concepts. In particular about Neural Networks, I was fascinated on how the concept was inspired from the functioning of neurons in the human brain, and how algorithms could be designed to teach machines to perform desired tasks in both supervised and unsupervised environments. My interest in developing practical application, inspired me to team up with two of my classmates and develop an Android app titled 'Smart Parking System' which allowed users to book parking spaces in advance. An intriguing aspect of developing the application was exploring real life issues and providing feasible solutions. Another intriguing aspect was selecting the appropriate technologies from a plethora of exiting choices and interfacing each of them to create a well functioning product. We faced and overcame such issues when we eventually decided to develop our application using Java and WAMP server (Windows Apache MySql Php).

I started my career with ISS and have been working there for the past 16 months. Being a part of the QBIT (Quality Benchmarking & Independent Testing) team at the firm, I ensure that the applications meet the high quality benchmarks set by the firm, and I achieve that, primarily by programming automated test scripts as well as by performing functional testing on the applications. I have also documented the workings of my firm's automation framework. Part of my job also involves understanding the architecture of applications and how and why the business team and clients utilize them. Since my firm develops products related to Proxy Voting and Corporate Governance, I am also involved in learning about financial markets and the proxy voting process and their underlying mechanisms.

Among the various automation projects that I worked on, one particular application that caught my fancy was an application called 'Equity Plan Scorecard'. Internally the application awards a set number of points, depending upon the input the user provides. I had to test this

application not only from a user's perspective but also had to validate the application's scoring mechanism. For accomplishing this I had to program formulae, which calculated the final scores from the inputs that the automation script itself had submitted. Working on such projects opened my eyes about what being a professional engineer truly is and how imperative it is to understand concepts about the domain upon which the respective product is being developed. This experience inculcated a habit in me, whereby I always try to learn and improvise my domain knowledge with regards to projects that I work upon.

My work experience has indeed improved my understanding of technology and has provide me a direction as in where I would want to move forward. I have realized firsthand how pivotal it is and the scale to which it has improved our lives. I have no doubts that Machine Learning and AI are the next big steps in not only testing but technology as a whole, moving forward. The way we have moved from testing applications manually to integrating automation in it, just goes to show the rapid and ever-evolving nature of technology and this has done nothing but only fueled my motivation to learn more in depth about computer science, and pursuing an MS in Computer Science at _____ would help me in achieving that.

My invaluable work experience, my bachelor's degree in computer engineering, coupled with my Oracle Certified Associate Java Programmer SE 7 (OCAJP SE 7) and Oracle Workforce Development SQL 11g certifications, have filled me with confidence that I am ready to face the challenging yet exciting prospects of the master's degree in the highly competitive environment of _____. From my professional experience I have realized that, learning is a never ending process and one needs to be a voracious student their entire life to imbibe that knowledge. Hence as an added preparation towards my graduate studies, I am currently taking online courses in Spring, Hibernate & Angular 5 at Udemy and also preparing for the OCPJP (Oracle Certified Professional Java Programmer) certification.

I am confident that an education at your reputed institute will mould me into one and given a chance I will be able to meet the requirements of your program. I look forward to a positive response from the admissions committee.

Sample 2 – MS in Analytics Applicant

My application to the MS program in Business Analytics is driven by my career aspiration to be a business analyst or a consultant. I desire to learn and adopt an analytical and rational approach towards problem solving which will in turn equip me with the skills required to guide organizations in making sound business decisions based on collating the right information and data. I am sure that the graduate program at your university will prepare me for a career where as a consultant/analyst specializing in data analysis and management techniques.

The foundation for a career as an analyst has been laid down by my strong mathematical aptitude and my work at Infosys. I have scored well in math in all my exams; I scores a 95% in math in my high school final exam and consistently above 90% in all my Engineering Mathematics courses. At Infosys, after my initial training, I stepped into the real world of

software industry where I learnt to gather, analyze and understand the requirements of the client and finally cater to the needs of the customer. The first project assigned to me dealt with the client American Express. It involved supporting and monitoring changes affecting the customer's environment. Maintaining records for all changes, including informational changes. I have full hands-on experience on ServiceNow (SNOW) tool which was used to implement Change Management process by providing on-demand capabilities for creating, assessing, approving and implementing changes to the environment.

My next assignment was with RBS (Royal Bank of Scotland), which involved testing activities that are critical for the success of any software. My responsibilities included doing an 'impact analysis' of the new requirements on the existing system, testplanning, analyzing the requirements then designing the test cases, preparing for execution, verification and validation of the migrated data from source to target environment and evaluating status till the test closure. I developed an automated tool with the help of SQL queries in order to optimize the fetching of required migrated data, analyzing and validating the data more efficiently. To ensure smooth deliverables to customer, best database design practices were implemented under the guidance of project managers and seniors. Currently, I am working on data management and data mining, which ensures a high degree of test coverage by providing the right data, in the right quantity, and at the right time, in a non-production environment. I have also had the chance of learning about the new ETL methodologies and Hadoop, and share my findings with my team.

While I am well regarded for my work, I owe this mostly to my past education. My undergraduate course helped me to grow as an individual both in terms of knowledge and personality. My institution also provided me platforms like national level technical and cultural fests that helped me in exploring my latent qualities like teamwork and leadership. I served as the Convener of Institution of Engineers (IE) (National level technical society). I organized and presented many seminars. I consistently scored well in quantitative courses throughout my high school as well as my undergraduate course. By the end of the graduation, I turned into a confident person to face the challenges of the corporate world.

My good academic performance gave me an opportunity to intern with Infosys for 4 months. During the internship I worked on a project called 'SPEECHBOT'. We designed a computer program designed to simulate an intelligent conversation with one or more human users via auditory or textual methods. The program replied to user's queries and also tried to recognize similarities between queries asked by the user. Working on this assignment, not just honed my programming skills in RebeccaAIML ,XML, JAVA but also helped me develop my understanding of requirement designing, analysis, robust management and statistics.

At this juncture in life, in order to evolve, where I would be exposed to both analytical and managerial aspects of technology, I have to gain more insight into areas of data management, analytics and project management. The Master of Science in _____ program offered by your university would help me develop such skills. This program offers a gamut of fields like decision making, risk management, cost management etc. which will help me in acquiring

general business knowledge with the latest techniques. As a result, it would enable me to deliver services more effectively and confidently at an organizational level so as to compete strongly in the global marketplace. I strongly believe that pursuing _____ at the University of _____ will give me an opportunity to form networks with adept faculty and students and will ace my skills.

I am convinced that your program and my passion, devotion and perseverance will surely help me to turn my career dream into reality.

Sample 3 – MS in Computer Science Applicant

My goal to pursue a graduate degree in Computer Science is twofold - one is to expose myself to the advanced technologies especially in areas of Artificial Intelligence and Machine Learning and second is to use these technologies for social development. All projects that have I worked on during my undergrad have had a common thread of using technology to develop application that bring change. I now want to advance my knowledge in several aspects of computing such as data science, AI, and machine learning so that I can apply these concepts effectively to drive social change.

The very first independent project I worked on was during my second year of college. My classmates were facing a lot of difficulty while borrowing books from the college library. During examinations there would be an acute shortage of books. I discussed this with my professor and together we came up with an idea to build an online library portal where students could easily access the books they required. Using ___ technologies and by modifying the ____ algorithm, we developed a system that improved the efficiency of the process of borrowing books from the library by over 80%. The web application was very well accepted by everyone in college and seeing the positive response I decided to inculcate a recommendation engine in the application to suggest more books for students to study.

Impressed by my work on this initiative I was shortlisted by our department to represent my college for the Smart India Hackathon; a national level annual Hackathon hosted by the government of India. I was given the responsibility of leading a team of six students. Our first task was choosing a problem statement to work on. We collectively decided to build a smart application which could predict the future meritorious students of the country using primary education data. Our objective was to track talented students and through governmental intervention ensure that they did not drop out of school due to financial reasons. Using the ___ method we managed to achieve a success rate of 95%. Our work was awarded with the 'Deloitte Innovation Award'; features that differentiated our project from others was its scalability, friendly user interface, and a high accuracy rate.

My desire to gain exposure to the software industry, prompted me to take up various training and internships. In the winter of 2017, I got an opportunity to work at Aditya Birla Group as a software development intern. This experience tested my programming skills as well as honed my skills in Software Engineering. The experience of developing a software for a company was

indeed very different from developing an application at a Hackathon. I was assigned the task of building a blogging application for the company's employees to interact on. The application included text translation capabilities to suit the diversity of employees working all over the country. It also included a recommendation engine to suggest employees' posts they would be interested in along with a dashboard displaying all the latest news about the company in real time. Impressed with the dedication towards my work I was offered to intern with the Aditya Birla Capital the following summer. This internship really kick-started my interest in Machine learning. I was given a steep task of modernizing the way the social media content was been monitored by the company. My task was to build a Machine Learning model which would accurately predict the sentiment of the message been tweeted by a user on the company's twitter handles.

For my final university dissertation, I am working with a team of two other classmates to develop an Artificial intelligence agent which can beat humans in Atari games. We started working on the project figuring out a way to improve the current algorithm to master as many games as possible. The current deep mind algorithm uses the concept of Deep Q learning which is a combination of Q learning and neural networks, but it can beat human intelligence in only 3 of the Atari games. We researched on selecting a deep learning model which could not only beat human intelligence at more games but also reducing the training time of the model. That's when we landed on the Bayesian Deep Q learning algorithm which not only helped us in reducing the training time significantly, but also helped our algorithm increase its win count by almost 85%.

My projects and internships have had a huge influence in paving the path for my master's program - a program where I not only advance my computing skills, but also learn how to use it for solving real world problems. The data science course at the University of Pennsylvania is the perfect platform to kick-start my career as a Data Scientist and apply my new found skills in a career that involves developing technology driven solutions for social change. The curriculum offered by the program is ideal for learning such skills. The Warren Center for Network and Data Science has produced some of the best data scientists in the world. It would be an honor to work with such professors who are at the peak of their prowess.

Thank you for your consideration, and I look forward to being a MS student at your program

Sample 4 – MS in Finance Applicant

Vincent van Gogh said, and I quote "Great things are not done by impulse, but by a series of small things brought together. And great things are not accidental, but must certainly be willed." My decision to pursue my career in finance cannot be summarised in a better manner.

I developed an inclination towards finance during my work on some projects that I took up during my undergraduate program in accounting and commerce. One such project involved the financial analysis of a multinational company's operations in India. Here I analysed the performance of the company through ratio analysis, liquidity levels, investment pattern, and profitability structure. This also gave me insights into their strategy of maximising shareholder

value through sustained and planned investments. Another project that I worked on, pertained to considerations in audit on specific industries. This involved reviewing company performances by analysing their audit reports. I chose to review companies in the hospitality sector and I used various tools and techniques in audit for reviewing their performances both from the operational and investment angle. This gave me insights into the understanding of the internal control systems used by various companies, and how factors such as PE ratios and Debt to Equity ratios could be used to predict the company's health.

A more elaborate project that I worked on involved the analysis of current trends in national and global economies. This was the project which exposed me to areas other than finance. The compilation and study on the various trends in the global economies, their interdependence in the globe and the impact of geopolitical events in the globe was revealing. The project was well appreciated for its comprehensive outcome.

After college, I underwent a three-year full-time internship in accounting, audit and assurance in a large accounting firm. During the internship I was given various assignments in different areas of finance and accounting which involved preparing financial statements, compliance study for clients, audit and assurance, inventory valuation and evaluating mergers and acquisitions which gave a rich experience and a wide range of knowledge as I was working in a live situation. Initially for a year my assignments were limited to conducting audit and preparing financial statements. However, often we had to go an extra mile to provide advice to our clients regarding their investments, assets and more. This required a thorough understanding of the business the client was in. Such exercises and research helped me explore areas of investment advisory and consulting, and I developed an interest in it.

In another challenging assignment I was part of the investigative audit team for a luxury goods manufacturer for identifying and quantifying of a fraud that had taken place. This assignment brought out the clear misuse of finances from the accounting aspect. By virtue of my good performance on this assignment, I was made a part of the planning committee for assignments and projects. This gave me an insight and exposure into the working of the top management and feel of the corporate world.

An independent assignment during the third year of my internship required me to prepare financial statements of a portfolio management company. Even though I wasn't given an opportunity to design portfolios, the amount of practical exposure and knowledge that I gained during the course of this assignment gave me a clearer picture of how things work as a portfolio manager and understand nuances of the profession. In another focused assignment, I was part of a team for strengthening of controls in inventory management of a manufacturing company, and our efforts reduced inventory wastage by 15%.

All these practical experiences combined with the theoretical knowledge of I am gaining while pursuing my CA (Indian equivalent to a US CFA), has ignited a desire to venture into areas of investment banking, risk management, or fund management. I yearn to work one of the top

leading investment bankers like JPMorgan or Goldman Sachs, and in the long term start my own investment banking, fund management, and consulting venture.

With the initial expertise and enthusiasm my next step to achieve this goal is to pursue advanced learning through Master's course in finance. I am applying to the MS in Finance program at your university as your program offers an exhaustive great curriculum that covers most of the topics of my interest, namely _____ *(mention names of few courses that the program offers*). Additionally, the opportunity to learn from experiences faculty under whom I can undertake research in specialised topics of my interest such as valuations will allow me to understand new concepts and methods beyond what is taught in class.

Thus, in conclusion I can say that the decision to pursue a career in finance and be a fund manager or an investment banker was not something that was made overnight. Pursuing a degree in finance is the next logical step towards this goal.

Sample 5– MS in Mechanical Engineering Applicant

My application to the MS in Mechanical Engineering program is driver by my ambitions to make a mark as a design engineer in the domain of FSI (Fluid Structure Interaction) & related fields.

During my sophomore year at college, I started working under the guidance of our department head who introduced me to the field of vibrations in structures through a project on “Vibration attenuation of a golf club”. Although I was yet to undertake the course on Vibration and Structural Dynamics, he encouraged me to perform independent study. Starting from elementary dynamics and with an understanding of center of percussion, I was able to model this system as a cantilever beam. I developed field equations taking necessary assumptions and verified the solution using FEA. After several iterations of altering the mass distribution of the golf club, I was able to reduce impact load transferred to the hands of player without compromising the swing capabilities of the club. This project gave some meaningful direction to my ambition; the field of vibration had had begun to stimulate me.

In the following year I got an opportunity to work with the R&D division of Indian Railways. My project here involved using Romax Designer to model a Gear train and modifying gear micro-geometry to study its influence on Gear noise. During this intern I came across the works of Donald Houser, Ahmet Kaharman on Optimum profile modifications for spur gears. It was a special stint for me, as I was not only able to engineer my first component but also able to understand applied aspects of engineering like cost of product, impact of schedule etc.

For my undergraduate thesis I worked on a challenging and very interesting fluid structure interaction problem -“Performance Evaluation of L-shaped Coriolis Mass Flow Meter (CMFM) “under the guidance of then HoD Prof S.C. Sharma. I developed a mathematical model using Hamilton’s principle, and followed it up by a FEM analysis in ANSYS. I used ICEM CFD to

generate mesh. The model was refined by using hexa mesh instead of tetra, and creating dense mesh near bends to reduce bend losses. Results from the experimental set-up showed the validity of these models. This project was particularly challenging, as it helped me grow my understanding from only structural dynamics to the coupled dynamics of both structures and fluid. Moreover, it helped me identify my area of interest- FSI. To develop it further, I needed a more in-depth knowledge in this field which could be substantiated by research. Unsurprisingly obtaining an MS, followed by Ph.D., became my ultimate academic goal.

Before applying for Masters, I decided to work in an industry where I can experience practical applications ofFSI. I, thereby, joined the petro-chemical major Reliance Industries Limited as a Pipe Stress Engineer. Designing the piping layout between a column and a preheater in MEG (Mono-Ethylene Glycol) project is the high point of my job thus far. This job required designing a piping which had to withstand vibrating two-phased flow fluid. Since it was the most critical connection in the plant, traditional analysis methods were superseded with more comprehensive study of turbulent boundary layer (TBL)-induced vibration of structures that involved the coupling of structural and fluid vibration. The vibrational response was described numerically with the spectral finite element method (SFEM) (as explained in the works of F. Birgersson et al.). After studying the response, visous- dampers were strategically placed to dampen out the vibrations. Works like these at jobs fortified my interest in FSI.

Two and a half also gave me time to conduct independent study on this topic. Of all the applications, the study of aeroelastic effects (esp. flutter) and vortex induced vibrations interested me the most. In these fields, work done by Prof. Oddvar Bendiksen (of UCLA, Henry Sameuli School of Engineering) grabbed my attention. It gave a good review of aeroelastic mechanisms behind transonic flutter and investigating different model to predict such behaviors. Given an opportunity, I would love to work with Prof Bendiksen to gain in-depth understanding of Transonic Flutter and possibly develop a classification scheme of aeroelastic problems and modeling based on physical and aeroelastic considerations.

With an ultimate academic goal of obtaining a Ph.D., I am applying for the Master of Science degree in Mechanical Engineering with specialization in Dynamics/ Fluid Mechanics. Master's degree from the prestigious University of California--Los Angeles (Samueli) would provide a strong foundation to launch my Ph.D. Also, interactions with fellow researchers from different communities would help me broaden my perspective on engineering, which will be essential in my endeavor to ultimately become a design engineer.

I would like to thank the admissions committee for their time and patience to read though my Letter of Intent. I hope to have conveyed my reasons and motivations for applying to the mentioned MS program.

Sample 6 – MS in Statistics Applicant

Early this year, I designed an Online Ad campaign using Search Engine Optimization techniques for a company Chenab Impex Pvt Ltd as a part of the Google Marketing Challenge, 2016 and completed in the top 100 teams out of 21000 teams worldwide. During this three-week online campaign, our goal was to increase the traffic directed to our client's website and run the entire campaign on a budget of under $200. This required a lot of research and thinking as to how to optimize the number of clicks while keeping the costs from spiralling out. The inherent number crunching and data analysis that this involved was refreshing. The net outcome of the project was an increase in site traffic by 30%. At that juncture I realized that a program in data analytics and statistics where I could learn mathematical model for optimization, was something I definitely ought to consider.

My career goal is at this juncture is to work closely in the area of optimization and supply chain management. I believe that my engineering background has laid the foundation for such a career. I have consistently ranked amongst the top 10% of my class with my grades in the courses of Applied Mathematics being amongst the top 2%. I enjoyed the topics of probability and an elementary level of statistics as a part of my curriculum, apart from calculus. It was this interest and sound background in Mathematics which helped me secure a Teaching Assistantship in Mathematics after college requiring me to teach integral calculus and differential equations to college freshmen. I believe that my proficiency at mathematics would aid me at developing and using quantitative financial models. Additionally, I have participated in certificate programs in Basic Financial Markets conducted by the National Stock Exchange. Following this I took further separate examinations to get myself certified in the Mutual Funds, Equity Derivatives and Currency Derivatives. These certifications have certainly helped me develop a basic understanding of few concepts in finance. I am also extremely competent in the use of MATLAB, using which implemented a project on Satellite and Microscopic Imagery Applications of Image Segmentation. As MATLAB has significant applications in areas of optimization used in solving Linear Programming problems, my experience in MATLAB and my general proficiency in computer programming would be of an added advantage.

I am currently part of a 3-member consulting team working on a project for Financial Technologies Knowledge Management Company Ltd, Mumbai. Our project for the Capital Market Authority, Kingdom of Saudi Arabia involves capturing of knowledge in the financial sector with the aim to raise the levels of information sharing, automation and culminating in an increased level of awareness among investors. Also, we are simultaneously working towards upgrading the Information Technology systems in place to facilitate a smooth E-transformation of the organization and integrating it with an E-governance initiative.

In December 2017 I joined The Nielsen Company as an Analyst at the Analytical Resource Centre, BASES, Mumbai working in the field of market research. The analyst role primarily involves analyzing consumer & marketing data to make actionable recommendations, and working with proprietary databases and software. The role also encompasses on product

evaluation and sales and volume forecasting in order to help marketers evaluate and improve the potential of their product ideas.

To accomplish my career goals, I need to broaden my perspectives and understand the concepts mathematical modelling, statistics, data science and optimization as well. The graduate program in statistics at _____ will most appropriately compliment my background and provide me with theoretical understanding, practical approaches and strategic competitiveness required in the field of interest in which I chose to pursue a career in. What attracted me to the program are the courses on ____ , ___ and _____. Additionally, the opportunity to learn and interact from Professors like ___ and ___ and learn about their research on _____ and _____ respectively will significantly enhance my learning.

I thus look forward to being a graduate student at your program.

Sample 7– MS in Electrical and Computer Engineering Applicant

After working with Qualcomm on semiconductor technologies for the past year and half, I have decided to return academics. This decision is driven by my career aspiration to work on advanced design and development assignments in areas of VLSI and Embedded technologies, my other interest being image processing. It is this desire that has motivated me to apply to the MS in __ program at your university.

During my bachelor's I was introduced to various allied fields of electronics and circuit designs that led me to design interesting hobby projects. One such course was Analog and Digital circuits that kindled my attraction towards concepts like sensor design. I substantiated this interest by designing cost effective sensor for pulse and heart rate monitoring applications. The success of these projects gave me the confidence to work on a major project in my third year of college that involved the design of a Sensor Based Platform for Sleep Apnea, which was sponsored by Intel. This project not only helped me delve deeper into concepts like ___ and ____, but also helped me hone my skills in programming. This helped me while conducting various workshops on Aurdino kit training, sensor design and applications etc for my college mates. It was a joyous moment for us when our project was implemented at the Excel Care Hospital, Bangalore.

My good academic performance and project experiences, helped me bag a winter internship at Indian Statistical Institute, Chennai. During this three-week long internship under Dr. Sudarshan Iyengar, I learnt about the concepts of Applied Cryptography and its applications in the fields of Computer algorithms, Steganography etc. I pondered on how cryptography could be used in image processing and this led me to take up a project that involved Image compression using Tetrolet Transform. Here I created Matlab modules of the transformations to perform compression and extraction of the input image. Later I worked on another internship, under the guidance of Dr. K V S Hari, at Indian Institute Science, Bangalore where I worked on creating various filter modules for noise elimination in image processing.

My major project was in the area of VLSI titled the "Design of a comparator circuitry for the Content Based Addressable Memories". The project involved designing a novel comparator design for the CAM bit cell and extending it to an 8x8 CAM array for performance comparison with the two existing CAM architectures of the same array size in order to prove the efficiency of the designed comparator over the conventional circuits. This helped me in knowing more about the deep driven concepts of CMOS and its changes with scaling of the technology. This awakened the passion in me to know more about the semiconductor technology right from the circuit design till the chip level enablement of these circuits.

My interest in semiconductor was further piqued when I started working with Qualcomm Technologies. My work involved designing various schematics and layouts for various functionalities of libraries of technology nodes. Working on the schematics side helped me gain knowledge on the functionalities of various circuits by performing pre and post processed simulations on them. On the other hand, designing layouts fetched me knowledge about various intricacies of circuit characteristics and the role of various layout stick diagram ideas to achieve better performances. Layout designing also helped in paving way for interaction with various semiconductor foundries across the globe. Design of layouts also helped me develop proficiency in Cadence Skill coding, a programming language to automate layout and schematic tasks on Virtuoso environment. This helped me in securing Second position at a contest called 'Skillathon', conducted to portray efficient automation using Cadence Skill coding. All this knowledge helped me to lead a team of 5 in developing Power Management Library for various technology nodes.

I now wish to embark on my journey as a graduate student where I can learn about advanced concepts in ___, ___ and ____. This has prompted me to apply to your graduate program as your program offers ample courses in these domains. Additionally, I found the research at the VLSI-VAST lab of your university very interesting. Getting an opportunity to participate in such research, and contribute my own bit to it, would significantly enhance my learning experience.

I sincerely hope to join the Electrical and Computer Engineering department at your university.