I am Abdus Salam Azad. My research interests broadly span the field of Machine Learning (ML). In my undergraduate and Master's thesis, I have worked on Memetic Algorithms. I have also attempted to explore the domain of ML further and its application in relevant fields through several courses and research collaborations. For my Ph.D, I am particularly interested to develop learning algorithms for Image and Natural Language Understanding. Hereby I express my interest to pursue my Ph.D at the Donald Bren School of Information and Computer Sciences at the University of California, Irvine (UCI)---a suitable place to pursue research in this area.

I had my first major research experience during my undergraduate thesis. I worked on Genetic Algorithms(GA) to solve MDPVRP---a lesser studied variant of the well-known Vehicle Routing Problem (VRP), which extends VRP with multiple depots and periods. I was supervised by \href{http://cse.buet.ac.bd/faculty/facdetail.php?id=mdmonirulislam}{Prof. Md. Monirul Islam}, who has been working on GAs for the past 20 years. For GAs to perform well, maintaining the population diversity is very crucial. To keep the population diverse, the existing GA approaches for VRPs incorporate a diversity measure with the solutions' fitness, which can be computationally expensive. Our proposed method aimed at maintaining the population diversity solely by the use of selection operators. We also proposed a new formulation for MDPVRP which allows interdependent operations among depots to provide cheaper solutions at the cost of a bigger search space. Our work was acknowledged as the winner in the yearly thesis poster competition organized by CSE, BUET (1st out of 57 submissions).

In my Master's thesis, I continued my work with Prof. Islam on our proposed MDPVRP formulation. This time, we developed a Memetic Algorithm (MA)---a hybrid GA with a local improvement component. The existing MA methods focus extensively on greediness, which typically leads them to a premature convergence and require additional techniques such as population restart for further progress. Our proposed method introduces a stochastic local improvement component to address this problem. The component focuses simultaneously on both greediness and randomness to maintain the balance between exploration and exploitation, which consequently helps to avoid a premature convergence. We also proposed a heuristic, partly greedy and partly stochastic, to construct the initial solutions. Extensive experiments on the benchmark problems revealed significant improvements over the state-of-the-art methods. This work has been accepted in the \href{http://ieeexplore.ieee.org/document/7835722/}{IEEE Transactions on Cybernetics}.

I developed a decent understanding of search techniques and combinatorial optimization during my thesis. To get a greater overview and deeper understanding of the topics of AI \& ML, I have taken a number of related courses during my undergrad and Master's, including AI, ML, Pattern Recognition, and Data Mining. I have also participated in MOOCs on ML (Coursera) and Deep Learning (Udacity). To strengthen my foundation in image analysis, I also took the Advanced Image Processing course. In this course, I learned a number of useful and fundamental techniques, e.g., image enhancement, filtering, segmentation, and compression. I also implemented a paper on content-based image retrieval.

My interest towards Image and Natural Language understanding piqued during one of my Master's projects. I surveyed the literature of bidirectional image-sentence search, searching images with sentence descriptions (and vice versa), and analyzed three of the state-of-the-art methods. I also proposed a two-stage approach that unlike the previous methods decouples object detection within the images from the inference of their inherent semantic relations. In the first phase, the representation of the objects in the images are learned in a joint ``Object embedding space'' to have close proximities with their matching words (e.g., an image of dog will have similar ``Object'' representation of the word ``dog''). In the next step, the ``Semantic'' representation of the images and sentences are learned leveraging the object representations.

I am currently working on two research projects: citation recommendation and machine/reading comprehension. In citation recommendation, the task is to recommend the most relevant works from the literature given a research idea or, abstract as a query. A paper may cite another paper for a number of different reasons, such as having similarity in the applied methodology, problem definition, and/or datasets. To incorporate such multidimensional similarity we are developing a multi-objective optimization based Learning to Rank algorithm. In my other project, we have modelled the machine comprehension problem (answering questions based on passages) as a path-finding game in a passage graph, where an agent traverses the graph to locate the answer upon given a question. The graph is constructed from the passage utilizing word embeddings, parse trees, and coreference resolution. I am training the agent using reinforcement learning.

Since my undergraduate studies, I have attempted to explore AI, ML, and relevant fields through my research, courses, and different projects. In my Ph.D., I am interested in designing learning algorithms which can gather knowledge from data, especially text and/or images, to solve meaningful problems by utilizing their inherent semantics. There has been a significant advancement in this field, particularly with deep learning approaches. However, there is room for further improvement. The current state-of-the-art supervised deep learning methods need lots of labelled training examples. I would like to design algorithms which can utilize unlabeled or partially labelled data. I am also interested in developing algorithms that solve problem of a particular domain (e.g, text) by utilizing data from another relevant domain (e.g., video) as auxiliary supervision.

I consider the Donald Bren School of Information and Computer Sciences at the University of California, Irvine (UCI) a suitable place to pursue my Ph.D. UCI provides an excellent environment for cutting-edge research with top-notch research facilities and many brilliant faculty members. I am interested to work with Prof. Leonid Sigal. His research on visual understanding using machine learning techniques aligns with my interest. I am equally interested to be a part of the Natural Language Processing (NLP) group, too. The works of Prof. Giuseppe Carenini and Prof. Raymond T. Ng on raw unstructured texts for summarizing, visual text analytics, and text generation intrigues me. I am also open to working with others who have interest in developing machine learning algorithms for solving problems arising in Image and Natural Language Unerstanding. I believe an opportunity to pursue my Ph.D. in the prestigious Department of Computer Science at UNC-CH will enable me to conduct impactful research and help me to advance towards a research-oriented career in academia.

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Since my undergraduate studies, I have attempted to explore the field of machine learning and develop machine learning algorithms for various domains. In my Ph.D., I am interested in designing learning algorithms which can gather knowledge from data, especially from text, to solve meaningful problems by utilizing their inherent semantics. However, gathering knowledge from vast unstructured text is very challenging. One interesting direction will be to work on new novel techniques which can impose structure on data. I am also interested in algorithms which can utilize data from a relevant domain such as image or, video as auxiliary supervision to understand text.

I am also interested in solving real-world social-economic problems using existing and novel prospective paradigms of machine learning.

-- In addition to its potential role in artificial general intelligence, our ability to draw inference in structured domains, is essential in a data-driven approach to science. I'm especially excited about applications in astronomy and cosmology.

-- automatically interpreting the semantic content of individual photos or videos

-- machine learning, with applications in artificial intelligence, vision, and the natural and social sciences.

--Since my undergraduate studies, I have attempted to explore the field of ML through my research, courses, and different projects. This exploration has increased my interest and motivation to work on ML algorithms which can solve complex and impactful problems from different domains. I am particularly interested in designing learning algorithms which can gain knowledge from heterogeneous structured and unstructured data (e.g., images, text, video, maps, and sensor data) and use the perceived knowledge to solve problems arising in ….

--- Before Sumaiya Madam

I am Abdus Salam Azad. My research interests broadly span the field of Machine Learning (ML). In my undergraduate and Master’s thesis I have worked on Memetic Algorithms. I have also attempted to explore the domain of ML further and its application in relevant fields through several courses and research collaborations. In my Ph.D I am interested to work on ML with an emphasis on natural language understanding (NLU). I am also interested in the intersection of NLU and image understanding.

I got my first taste of research in my junior year. We analyzed 40 years of historical weather data from different regions of Bangladesh to identify the trends in temperature and rainfall. We used a wide range of data analysis techniques, including clustering such as K-means, non-parametric trend tests such as Mann-Kendall and Sen's slope estimator, etc. We found a number of interesting insights, such as, over the years the maximum temperature of our country has significantly increased during June to November. In contrast, there have been no significant changes in rainfall. The results also indicate that in terms of temperature the eastern part of the country has faced more climatic changes than its western part. The findings of the study were published as a book chapter by Springer.

For my undergraduate thesis, I worked on Genetic Algorithms(GA) to solve MDPVRP---a lesser studied variant of the well-known Vehicle Routing Problem (VRP), which extends VRP with multiple depots and periods. I was supervised by Prof. Md. Monirul Islam, who has been working on GAs for the past 20 years. For GAs to perform well, maintaining the population diversity is very crucial. To keep the population diverse, the existing GA approaches for VRPs incorporate a diversity measure with the solutions' fitness, which can be computationally expensive. Our proposed method aimed at maintaining the population diversity solely by the use of selection operators. We also proposed a crossover operator by generalizing the Edge Recombination Operator---a widely used crossover operator for the Travelling Salesman Problem. Finally, we proposed a new formulation for MDPVRP which allows interdependent operations among depots to provide cheaper solutions at the cost of a bigger search space. Our work was acknowledged as the winner in the yearly thesis poster competition organized by CSE, BUET (1st out of 57 submissions).

In my Master's thesis, I continued my work with Prof. Islam on our proposed MDPVRP formulation. This time, we developed a Memetic Algorithm (MA)---a hybrid GA with a local improvement component. The existing MA methods focus extensively on greediness, which typically leads them to a premature convergence and require additional techniques such as population restart for further progress. Our proposed method introduces a stochastic local improvement component to address this problem. The component focuses simultaneously on both greediness and randomness to maintain the balance between exploration and exploitation, which consequently helps to avoid a premature convergence. We also proposed a heuristic, partly greedy and partly stochastic, to construct the initial solutions. Extensive experiments on the benchmark problems revealed significant improvements over the state-of-the-art methods. This work has been accepted in the IEEE Transactions on Cybernetics.

I developed a decent understanding of search techniques and optimization during my thesis. To get acquainted with other topics of ML, I have taken a number of related courses during my undergrad and masters, including Artificial Intelligence, Machine Learning, Pattern Recognition, Advanced Image Processing, and Data Mining. I have also participated in MOOCs on Machine Learning (Coursera) and Deep Learning (Udacity). As a lecturer in CSE, BUET, I have conducted Artificial Intelligence and Machine Learning lab courses. Besides, I am also instructing an applied machine learning course for a group of 20 graduates from five different institutions. Such experiences have allowed me to study machine learning techniques in depth.

In one of my Masters projects, I surveyed the literature of bidirectional image-sentence search, searching images with sentence descriptions (and vice versa), and analyzed three of the state-of-the-art methods. I also proposed a two stage approach that unlike the previous methods decouples object detection within the images from the inference of their inherent semantic relations. In the first phase, the representation of the objects in the images are learned in a joint “Object embedding space” to have close proximities with their matching words (e.g., an image of dog will have similar “Object” representation of the word “dog”). In the next step the “Semantic” representation of the images and sentences are learned leveraging the object representations. It is through this project work, my inclination towards the field of natural language and image understanding started.

I am currently working on two research projects: citation recommendation and machine/reading comprehension. In citation recommendation, the task is to recommend the most relevant works from the literature given a research idea or, abstract as a query. A paper may cite another paper for a number of different reasons, such as having similarity in the applied methodology, problem definition, and/or datasets. To incorporate such multidimensional similarity we are developing a multi-objective optimization based Learning to Rank algorithm. This research is jointly collaborated by BUET and the University of Illinois Urbana-Champaign. In my other project, we have modeled the machine comprehension problem (answering questions based on passages) as a path-finding game in a passage graph, where an agent traverses the graph to locate the answer upon given a question. The graph is constructed from the passage utilizing word embeddings, parse trees, and coreference resolution. We are working on a reinforcement learning method to train the agent.

I consider the Department of Computer Science at the University of California, Los Angeles (UCLA) a suitable place to pursue my Ph.D., as there are a number of active research

projects where I believe I will be able to contribute. I am particularly motivated by Prof.

Kai-Wei Chang’s current research directions, such as extracting knowledge from large unstructured text for solving problems including question answering or, learning and inference

with complex structures. My current projects (i.e., machine comprehension and citation

recommendation) align with these directions. These projects also align with Prof. Junghoo

Cho’s research theme|discovering interesting patterns from real-world data for different application domains. The citation recommendation project also matches with Prof. Yizhou

Sun’s research interests. As part of her research on recommendation via the Information

Networks, she also worked on citation recommendation (CIKM ’14). Her approach retrieves

relevant papers based on a number of meta-paths involving combinations of keywords, authors, citations, and venues. We measure the relevances from a different point of view, such

as relevance in terms of problem nature, solution approach, datasets, etc. I am also interested in Prof. Sun’s current research on mining data from heterogeneous domains with social

factors. Finally, I believe an opportunity to pursue my Ph.D. in the prestigious department

of Computer Science at UCLA will enable me to conduct impactful research and help me to

advance towards a research-oriented career in academia.

**Last lines**

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I am deeply motivated by the works of the Vector Institute. Particularly, Prof. Sanja Fidler's works in the intersection of language and vision align with my interest and brief experience. Prof. Marzyeh Ghassemi’s works on Machine Learning to predict human risk utilizing clinical data intrigues me too. Prof. Sheila McIlraith’s work on automated programming is equally exciting for me.

I am also motivated by the works of Prof. Marzyeh Ghassemi human risk analysis on clinical data using ML techniques. Prof. Sheila McIlraith’s work on automated programming is equally exciting for me.

I am particularly interested by Prof. Junaed Sattar’s work in his Minnesota Interactive Robotics and Vision Laboratory. His projects such as, smartTalk, Underwater Image Restoration, Adversarial Image Colorization extensively use different Machine Learning techniques. I believe my experience from my thesis and other ML related projects along with my familiarity with microcontroller based systems will enable me to contribute in his line of research.

I am also motivated by Prof. Hyun Soo Park’s works in Computer vision.

I am also interested in Prof. Arindam Banerjee’s works.

I am particularly motivated by Prof. Kai-Wei Chang’s current research directions, such as extracting knowledge from large unstructured text for solving problems including question answering or, learning and inference with complex structures. My current projects (i.e., machine comprehension and citation recommendation) align with these directions.

These projects also align with Prof. Junghoo Cho’s research theme|discovering interesting patterns from real-world data for different application domains.

The citation recommendation project also matches with Prof. Yizhou Sun’s research interests. As part of her research on recommendation via the Information Networks, she also worked on citation recommendation (CIKM ’14). Her approach retrieves relevant papers based on a number of meta-paths involving combinations of keywords, authors, citations, and venues. We measure the relevances from a different point of view, such as relevance in terms of problem nature, solution approach, datasets, etc. I am also interested in Prof. Sun’s current research on mining data from heterogeneous domains with social factors.

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**Previous version**  
This is Abdus Salam Azad, currently employed as a Lecturer in the [Department of CSE](https://cse.buet.ac.bd/) at Bangladesh University of Engineering and Technology (BUET). I have obtained my B.Sc. and M.Sc. degrees from the same department. Since the days of my under-graduation, I have been fascinated with Machine Learning(ML) and in general with Artificial Intelligence(AI). I wish to pursue my Ph.D. in this broad field of unending research prospects.

My interest in machine learning techniques started to grow during my sophomore year of undergraduate studies. I was developing an image editor with different filters. While the conversion of a color image to grayscale is straightforward, I was puzzled with the reverse task. After a few days of research, I came to know that some techniques from “Machine Learning” can solve this problem just by seeing lots of examples. I was thrilled by my newfound knowledge and its endless possibilities. Since then I have been fascinated towards ML, and in general towards AI.

I got my first taste of research in my junior year. I along with two of my classmates had developed an interactive online portal for climate researchers to analyze rainfall and temperature data of Bangladesh. The data spanned more than 40 years and were collected from 37 weather stations of Bangladesh Meteorological Department located across the country. We investigated the trends and characteristics in these data using a number of standard statistical techniques, time series prediction models, and clustering methods. The findings of the study were published as a book chapter by Springer in 2014.

For my undergraduate thesis in the senior year, I started working with Prof. Md. Monirul Islam, one of the prominent AI researchers in Bangladesh. **Prof. Islam worked on Genetic Algorithms (GA) and I was amazed by the way they solve computational problems by mimicking evolution.** With Prof. Islam I focused on solving Vehicle Routing Problems (VRP) and its different variants using GA. We proposed a new variant which can provide cheaper solutions for VRPs with multiple depots and periods. We also designed a basic GA framework for solving this new variant. Our work got the first prize in the ``Undergraduate thesis poster presentation, 2014, BUET.''

After graduation, I continued my work with Prof. Islam on GAs for my Master's thesis. The existing GA methods solving VRPs with multiple depots and periods focused extensively on greediness, which typically lead them to a premature convergence and required additional techniques like population restart for further progress. We proposed a memetic algorithm, a hybrid GA, with stochastic nature. It simultaneously focuses on both greediness and randomness to maintain the balance between exploration and exploitation, which consequently helps avoiding a premature convergence. Our work has been accepted in the IEEE Transactions on Cybernetics.

I developed a decent understanding of search techniques and optimization during my thesis. To get acquainted with other topics of AI, I took a number of relevant courses in my undergrad and masters. During my senior year I took three such courses: Artificial Intelligence, Machine Learning, and Pattern Recognition and during my Masters I took Advanced Image Processing and Data Mining. Out of self motivation, I have also started studying deep learning techniques. Currently, I also conduct a training course on Practical ML for around 20 graduates from different universities of Bangladesh. **Such experiences have helped me to strengthen my grasp on AI & ML techniques. More importantly they have increased my appetite for learning further to gain a deeper understanding.(Any suggestion on how can I change this line)**

Currently, I am working on citation recommendation problem, where, given a paper abstract as a query, the task is to recommend the most relevant works from the literature. A paper may cite another paper for a number of different reasons, such as having similarity in the the applied methodology, problem definition, and/or datasets used for evaluation. To incorporate such multidimensional similarity we are developing a multi-objective optimization based Learning to Rank algorithm for this task. This research is jointly collaborated by BUET and the University of Illinois Urbana-Champaign.

I always envisioned me as an academician and as a recognition of my academic excellence, I got the opportunity to join my Alma Mater as a Lecturer just after my graduation. It has been three years of my teaching career. During this period, my ability of connecting with people, collaborating with ideas, and analyzing problems with different perspectives have increased. I have conducted a number of courses including Artificial Intelligence, Machine Learning Lab, Microprocessor and Microcontroller, and Software Development Lab. I have also designed <a number of?/quite a few?> study materials and lab assignments for these courses. In addition to academic activities, I was actively involved in founding the Engineering Students Association of Bangladesh (ESAB), first of its kind in Bangladesh, with a goal to engage young engineers in solving our social problems. I also served as its Information and Communication Secretaryfrom September 2011 to November 2013. **(This paragraphs seemed out of flow?)**

**From my brief academic and research experience, I feel the intense need of pursuing a Ph.D. to focus on research**. My research interests broadly span the field of machine learning with emphasis on Natural Language Understanding (NLU) and its intersection with Image Understanding. I consider the department of Computer Science at the University of California, Los Angeles as one of the most suitable places to conduct research on this area. There are a number of research groups having similar research interests as mine. I am particularly interested to work with Prof. Kai-Wei Chang on NLU. Prof. Song-Chun Zhu’s works in his Center for Vision, Cognition, Learning and Autonomy also motivates me. I also find Prof. Guy Van den Broeck’s work on probabilistic reasoning in his StarAI lab highly intriguing. I believe my knowledge, experience, and research interest make me a well-suited candidate for the prestigious department of Computer Science at the University of California, where I will be able to conduct novel research works with my determination, sincerity, and hard work to pursue a research-oriented career in academia.

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In the machine comprehension project, we are focusing on learning graph traversals for answering questions. In citation recommendation, we are leveraging raw texts of papers along with keywords and other relevant information to generate a ranking of relevant research papers.

and hereby express my interest to pursue my Ph.D. in this reputed department. I believe a Ph.D. in my area of interest would be the foundational step for a research career in academia. I would also like to mention that, I received an admission offer at your prestigious department for Fall 2017 but I could not obtain a study leave from my department and hence could not avail the opportunity.

<department of Computer Science> at <University of North Carolina at Chapel Hill>. I am deeply motivated by the works of Prof. X, Y and Z.

-- **I have come to understand that it takes a whole different set of skills to find problems that matters and finding the shortcomings of the existing methods.** A Ph.D can lead me to gain such skill set.

-> teaching motivation

-> I chose Stanford University, it houses some of the most brilliant minds in this area

-> My research interests broadly span the field of machine learning with emphasis on information retrieval, recommender systems and NLP

-- <https://forum.wordreference.com/threads/a-few-several-a-number-of-a-lot-of-many.255950/>

-> Currently, I am involved in two different research projects at my university. In one of them, we are working on an algorithm which can generate a list of relevant papers upon given an abstract of a research proposal. We are developing a multi-objective Learning to Rank algorithm, which takes into account different criteria to generate multiple lists of relevant papers, one for each criteria,and later on merges them to one single list. The research is jointly collaborated by BUET and the University of Illinois Urbana-Champaign. In the other project, we are focusing on the problem of identifying fake and modified images in social media. We are developing a method to quantify the amount of modification done on an image, without the reference of the original image. Devising such a method is of utmost significance as pointed in our user survey for credible interaction in social media. The research is jointly collaborated by BUET and the University of Toronto.

* Academic plans and research interests
* Relevant experience
* Future career goals
* Why UC Irvine would be a good intellectual fit for you

**Motivation and Research Interests:**

**B.Sc. & M.Sc. Thesis + Relevant Experience:**

**Teaching Experience**

**BSC and MSC experience**

**Career Goals:**

**Why This UNI is a good fit for me**

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After Bayzid Sir, version

This is Abdus Salam Azad, currently employed as a Lecturer in the [Department of CSE](https://cse.buet.ac.bd/) at Bangladesh University of Engineering and Technology (BUET). I have obtained my B.Sc. and M.Sc. degrees from the same department. Since the days of my under-graduation, I have been fascinated with Machine Learning and in general with Artificial Intelligence. I wish to pursue my Ph.D. in this broad field of unending research prospects. I find the department of Computer Science at University of North Carolina at Chapel Hill as one of the most suitable places to conduct research on this area and hereby express my interest to pursue my Ph.D. in this reputed department. I believe a Ph.D. in my area of interest would be the foundational step for a research career in academia. I would also like to mention that, I received an admission offer at your prestigious department for Fall 2017 but I could not obtain a study leave from my department and hence could not avail the opportunity.

My interest in machine learning techniques started to grow during my sophomore year of undergraduate studies. I was developing an image editor with different filters. While the conversion of a color image to grayscale is straightforward, I was puzzled with the reverse task. After a few days of research, I came to know that some techniques from “Machine Learning” can solve this problem just by seeing lots of examples. I was thrilled by my newfound knowledge and its endless possibilities. Since then I have been fascinated towards machine learning, and in general towards artificial intelligence.

I got my first taste of research in my junior year. I along with two of my classmates had developed an online portal providing an interactive interface for climate researchers to run different analysis on rainfall and temperature data of Bangladesh. The data spanned more than 40 years and were collected from 37 weather stations of Bangladesh Meteorological Department located across the country. We investigated the trends and characteristics in these data using a number of standard statistical techniques, time series prediction models, and clustering methods. The findings of the study were published as a book chapter by Springer in 2014.

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For my interest in the field of AI, I took a number of relevant courses in my undergrad and masters. During my senior year I took three such courses: Artificial Intelligence, Machine Learning, and Pattern Recognition and during my Masters I took Advanced Image Processing and Data Mining. After completing my masters, I have started studying deep learning techniques. Currently, I also conduct a training course ( 32 classes 2.5 hours each - spanning over four months) on Practical ML for around 20 graduates from different universities of Bangladesh. Conducting this course is helping me a lot to learn new techniques and gain a better theoretical understanding of the methods I studied earlier.

Currently, I am working on citation recommendation problem, where, given a paper abstract as a query, the task is to recommend the most relevant works from the literature. A paper may cite another paper for a number of different reasons, such as having similarity in the the applied methodology, problem definition, and/or datasets used for evaluation. To incorporate such multidimensional similarity we are developing a multi-objective optimization based Learning to Rank algorithm for this task. This research is jointly collaborated by BUET and the University of Illinois Urbana-Champaign.

I always had a strong inclination towards academia/I always wanted to be an academician/ I always envisioned me as an academician and as a recognition of my academic excellence, I got the opportunity to join my Alma Mater as a Lecturer just after my graduation. It has been three years of my teaching career. During this period, my ability of connecting with people, collaborating with ideas, and analyzing problems with different perspectives have increased. I have conducted a number of courses including Artificial Intelligence, Machine Learning Lab, Microprocessor and Microcontroller, and Software Development Lab. I have also designed <a number of?/quite a few?> study materials and lab assignments for these courses. As a faculty of the most renowned engineering university in Bangladesh, it has also been my responsibility to contribute towards different nationally important projects such as, Result Preparation for College admission, Development of Interactive Digital Textbooks etc. In addition to academic activities, I was actively involved in founding the Engineering Students Association of Bangladesh (ESAB), first of its kind in Bangladesh, with a goal to bring all engineering students under one roof to work closely with the Government of Bangladesh for providing engineering solutions to local problems. I also served as its Information and Communication Secretaryfrom September 2011 to November 2013.

I believe my knowledge, experience, and research interest make me a well-suited candidate for the prestigious <department of Computer Science> at <University of North Carolina at Chapel Hill>. I am deeply motivated by the works of Prof. X, Y and Z. I strongly feel, the research environment of <UNC-Chapel Hill> is suitable for me to conduct research in my area of interest. I believe I will be able to conduct novel research works with my determination, sincerity, and hard work to pursue a research-oriented career in academia.

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--This is Abdus Salam Azad, currently employed as a Lecturer in the [Department of CSE](https://cse.buet.ac.bd/) at Bangladesh University of Engineering and Technology (BUET). I have obtained my B.Sc. and M.Sc. degrees from the same department. As the next step of my academic expedition I now plan to pursue a Ph.D. As I have been fascinated with Machine Learning and in general with Artificial Intelligence since the days of my under-graduation, I express my interest to pursue my Ph.D. in the department of Computer Science at University of North Carolina at Chapel Hill as it is one of the most suitable place to conduct research on Machine learning. I believe a Ph.D. in my area of interest would be the foundational step for a research career in academia.

-- Immediately after my graduation I joined the department as a lecturer and has been working there since.

-- With a fascination (with)to work on image understanding/natural language understanding using machine learning techniques

The field of image understanding is still emerging. Same goes for natural language understanding. We have large text corpora, however, understanding the texts and doing simple inferences are still a developing area. I feel motivated to work in natural language understanding and its intersection with image understanding.

The field of interpretable machine learning, automated reasoning, image and natural language understanding attracts me most. With a fascination to work on the intersection between <natural language and image understanding using machine learning techniques>, I want to pursue my Ph.D. in the <department of Computer Science> at <University of North Carolina at Chapel Hill>. I believe a Ph.D. in my area of interest would be the foundational step for a research career in academia.