

**Abstract:** Higher study is a game-changer for students. For a majority of us, studying at a reputable university abroad is an imminent goal. For a long time, students from developing countries tend to seek higher study from developed countries. Higher educated peoples are playing an important role in building a civilized society and a developed nation. The more educated a nation is, the more developed it is. Almost all the countries are trying to increase the quality of their higher education day by day. Although Bangladesh is a developing country, day by day Bangladesh is also becoming the preferred country of foreign students. The purpose of this paper to Analysis foreign students' academic and lifestyle data identify whether Bangladesh is suitable for higher education or not, those who currently in this country for higher study, are they satisfied or dissatisfied. If they have any problems, what kind of problems are they experiencing and how to resolve them. we have identified the university's problems where they need to improve, so that they can attract more foreign students. For the case of foreign students, we have collected data from 399 present international students in Bangladesh. This paper has used some popular classification algorithms such as support vector machine, KNN, ANN, Random Forest. We also present a comparison of used machine learning algorithms over different evaluation metrics. After all, we have analyzed the data to show which factors play a major role in students' decision making.

**Introduction:** The educational process encourages the full development of a person's inherent qualities and helps him to acquire the skills needed to establish himself as a productive member of society. Education is the acquisition of knowledge or skills in the general sense. In a broad sense, education is the process of gaining systematic knowledge and education is a continuous practice of developing to the fullest of potential. According to Article 17 of the Constitution, every child in Bangladesh has the right to free education up to the secondary level. Secondary and higher secondary level educational institutions are affiliated to ten (10) education boards. The boards conduct three public examinations: Junior School Certificate (JSC) examination, Secondary School Certificate (SSC) examination and Higher Secondary Certificate (HSC) examination. Educational institutions at the higher secondary level are known as colleges. From then on, the journey of higher education of Bangladeshi students is started.

Higher education usually involves a degree-level or degree qualification. In most developed countries, the population (up to 50%) now enters higher education at some point in their lives [Wikipedia]. Higher education is very important for the formation of a civilized nation and the national economy. Civilized society has been relying on higher education institutions for many centuries to create leaders in various professions. The scope of higher education is expanding over time and will continue. There has been remarkable progress in various sectors (business, commerce, industry, and communication) centered on the higher educated people. That's why higher education institutions must be aware of the quality of education provided in these areas. Therefore, higher education in the modern world must be developed in many special disciplines and it should be suitable for a large number of students.

After World War II, there is a tendency for students from poor and developing countries to seek their higher education from developed countries [18]. Now the question is why? Every student

wants to go from his current education system to a good education system. The reason is there is a big difference between the education system of the developed country and the education system of the developing country. There are many opportunities for research abroad. Those who study abroad are far ahead of the general public in terms of independence, self-reliance, intelligence and creative ability. As leaving their family and living alone in a foreign country, they are self-reliant and skilled in solving problems. Not only that, they are not lacking in any challenging task. By staying abroad, a student will become aware of the politics, culture, customs of that country. In addition, he will have a different view of the world. Learn about the world's political issues Being abroad, he has to learn the language of that country, which will add another pastor to the crown of his experience. Higher education abroad will not only improve the educational qualifications and values of a student, but also increase his professional skills.

Before 1991 there had only eight public universities in Bangladesh. In spite of having the knowledge, there had no opportunity to seek higher study for the limited number of sits. Therefore, the government of Bangladesh took the initiative to set up public universities as well as private universities so that Bangladeshi students can get higher education in the country. After 1991, the private university of Bangladesh started its journey. At present, 42 public universities and 109 private universities in Bangladesh have confirmed the quality of their higher education (UGC report 2018). Currently, these universities are studying with Bangladeshi students as well as foreign students (especially South Asia, Africa). In Bangladesh, the number of foreign students is increasing day by day. But after talking to the current foreign student, we found out that due to some problems (could not attend the desired university, cannot afford the cost) some students came to Bangladesh and return to their country without completing their studies. This threatens the student's carrier. Because the student leaves the country for higher education and spends a lot of money behind it. Therefore, one of the challenges of the present government of Bangladesh is to ensure the safety of foreign students and how to ensure the quality of higher education. The structure of the paper is organized as follows.

In section 2 we have discussed about related work. In section 3 we have shown our data distribution. In section 4 we have shown our Methodology. In section 5 we have discussed our result and analysis. In section 6 we have shown conclusion and references of the paper.

**Related Work:** The process of internationalization in higher education is progressing steadily [16].

GEORGE V. COELHO at all [1]. In their research, they described the main factors that put foreign students at risk in higher education as a result of the transfer of new cultures and environments. They Mentioned Many complications arise when young people migrate abroad for higher education as they become acquainted with new cultures and environments. So, they have to adapt to that environment as soon as possible to overcome this complication. They highlighted a life cycle of the students and they said that child's first school experience, the junior school transition, the transition from high school to college, graduate student stress, etc. Education overseas may be a major developmental and psychosocial move in a foreign student's life. Like other moves, it

represents an arrangement of stages of high-risk situations that deliver emotional push as well as openings for adapting behavior.

C. D. THROSBY et al. [7]. They have shown in their research how foreign students play an important role in the economic development of the host country. They described both direct and indirect costs-benefit. They have mentioned tuition fee, accommodation, meals and the costs of any additional services provided, such as special counselling, or host country language courses as a direct benefit. For the indirect benefit, they point out that local students can become acquainted with a wide variety of cultures, and that foreign students take the research sector further by participating in research. Similar to these benefits there are some possible parallel costs such as enmity from local students, unpleasant reaction by foreign students to the host institution, etc.).

There have been a few endeavors to measure the total benefits and costs of foreign students in host countries (for example, Reubens 1975[3]; Blaug 1981[4]; Jenkins 1983[5]; Winkler 1983[6]; Chishti 1984[7]; Fry 1984[8]; Manning et al.

Every country follows some foreign policy for foreign student. According to [9] Prior to 1986, about 45 to 60 per cent of foreign students in Australia were studying on scholarships. As a result, the Australian government had to pay a large subsidy every year. In 1986, the government of Australia issued a proclamation to all educational institutions in their country, asking all educational institutions to declare their course as fully paid for foreign students. As a result of the Australian Government's decision, students from many developing countries, despite their qualifications, were barred from pursuing higher education in Australia. To address this problem, the Australian government introduced the Merit Scholarship in 1990. Within 4 years of this rule, the number of foreign students in Australia increased from 24,000 to 55,000, of which 30,000 were fully paid.

Nowadays machine learning algorithms have become very popular in research. At present machine learning techniques are being used to solve other problems as well as the problems of educational institutions such as institutions, teacher quality (Góes et al. 2014[10] "Education quality measured by the classification of school performance using quality labels". Xiao-Yan Liu 2015[11] "Private colleges teachers evaluation system based on support vector machine (SVM)."), examination and assessments (Muklasan et al. 2017[12] "Fairness in examination timetabling: student preferences and extended formulations."), measure practices impact (Delen et al. 2013[13] "A comparative analysis of machine learning systems for measuring the impact of knowledge management practices"), learning product selection (Alptekin and Ertugrul 2010[14] "An integrated decision framework for evaluating and selecting e-learning products"; Oztekin et al. 2013[15] "A Machine learning-based usability evaluation method for eLearning systems."), course planning (Abdallah 2015[16] "A decision support model for long-term course planning") and more.

According to Acharya A, Sinha D (2014) [17] et al. Developed a model using machine learning to predict student's performance. They have mentioned the academic performance of students depends on previous academic records, economic status, family background, performance in mid semester examination. Based on these factors they apply Decision Tree (DT), Bayesian Networks (BN), Artificial Neural Networks (ANN), Support Vector Machines (SVM).

Tan M, Shao P (2015) by using Artificial Neural Network (ANN), Decision Tree (DT) and Bayesian Networks (BNs) developed a model to predict the dropout of student in eLearning program.

Although some of these studies addressed educational problem issues at the higher education level, none have considered the satisfaction and dissatisfaction on host country. While previous research focuses on prediction, the most commonly used algorithms are artificial neural networks and support vector machines. Some authors, including ourselves, go further into comparing these algorithms' performance.