



MAHARAJA SURAJMAL INSTITUTE OF TECHNOLOGY

(Approved by AICTE & Affiliated to Guru Gobind Singh Indraprastha University)

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Ref. No. : MSIT/GEN/20-97

Dated :

04.01.2020

LETTER OF RECOMMENDATION

I find immense pleasure in recommending Ms. Tanushree Marwah for admission to your esteemed university. Being the Head of the Department and her professor, Maharaja Surajmal Institute of Technology, I have known her for 4 years where she pursued her B.Tech degree in Information Technology.

I taught her core computer science subjects like *Compiler Design* and *Cryptography and Network Security*. She was a straight 'A' student and fared well in all her subjects and had an unmatched penchant for research in areas like network security, given how logically sound she is. Her strength lies in her pragmatic perspective and prescience, which intrigued me to mentor her research in such highly diverse areas. For her college minor project, she was keen on finding the best technique for file sharing over public networks and had come up with a perfect idea of combining techniques like Intrusion Detection System (IDS), Advanced Encryption Standard (AES) and File Splitting. It was an idea never implemented before and her approach to the project was highly appreciable. She convinced me that it would be worth my time and was highly dedicated towards achieving her goal.

Apart from being technically sound, she showed competence in visualising practical difficulties and this, in my opinion, makes her a potential research student. In her minor research project, she showed excellent determination and encouragement to pursue research, digging deep into the vast field of network security and checking the credibility of algorithms herself. Her pursuit of getting to the root of the topic of encryption and security was interesting as she always wanted to know why the most popular algorithm is the best in the industry. The project was a working model demonstrating how file encryption and sharing over public servers can be implemented in the safest way possible. For this, she used Microsoft Visual Studio and SQL Server Management Studio as the framework and C# as the programming language, which made the project scalable and easier to comprehend. I was delighted when, as Head of the department at that time, I went through her project report to find that she had successfully utilised the concepts taught in class, not only to implement them in her projects, but also



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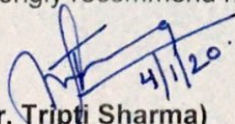
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extend them to create more. She utilised the AES or Rijndael algorithm to facilitate the process of encryption and decryption used in the project, and her application of the same along with file splitting technique made this project noteworthy. She consumed knowledge from both, books on cryptography from the college library as well as the internet, and presented her report in a properly structured way.

I also mentored her major project which was concerned with the analysis of Markov Passwords using Transition Probability Matrix. I found her choice of research topic intriguing and thus got to explore her creative abilities. In her project, she included processing of passwords via 1-Step and 2-Step Transition Probability Matrix, and resulted in discovering that the latter is more efficient. It was thus evident to me that she has a good analytical skill set as her understanding of the topic was clear and she could answer the constraints that are currently found in these methods. It is also clear that she is capable of conducting research independently and with minimal guidance, can achieve her goals.

As a student she was regular in submitting assignments in all my classes. She was active and punctual in all my classes. Her academic consistency can be seen in her grades, as she scored A+ in both the subjects I taught her, with outstanding performance in the lab periods as well, in which she got O grade. I believe her one-month internship at the Cyber Security Department of Ernst & Young, LLP in Gurgaon, Haryana, would have given her more valuable insights on the topic of security.

Considering Tanushree's academic performance and technical abilities I have no doubts that she would be an excellent candidate for your Master's program. I thus strongly recommend her for admission to the master's program at your institution.


(Dr. Tripti Sharma)

Head of Department, Information Technology
Maharaja Surajmal Institute of Technology, Delhi
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