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MD MAMUN ALI

Date of birth: 23/10/1995 | **Nationality:** Bangladeshi | **Gender:** Male | **Phone Number:** (+86) 18881670537 (Mobile) | **Email address:** Mamun.njupt_china@aol.com

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Address: 518000, Nanshan district | Shenzhen, Guangdong, China

About me:

I'm an enthusiastic and disciplined person who wants to become a renowned Computer Science & Technology I will like to develop my career by working in a rewarded institution with challenging avenues where my educational potential matches the growth of the organization and I can share my knowledge with honesty and dignity to serve my society.

Research Interest: Artificial Intelligence, Machine Learning, deep learning, Data Science & Big Data Analytics, Image Processing, Internet of Things (IoT) and Embedded Systems, Software Engineering & Development,

WORK EXPERIENCE

01/03/2023 - Present. Shenzhen, China

Global Gaming Manager TRANSSION Holdings CO., LTD

Key person of Overseas Mobile Gaming Team at TRANSSION, Market Research, Market Entry Strategy, Partnership and Alliances, Business Planning, Product Localization, Regulatory Compliance, Market Expansion, Sales and Marketing, Risk Management, Team Management, Budget Management, Reporting and Analysis, Cultural Awareness, Travel, Adaptability, Language Skills, Collaboration & Communication

01/08/2020 - 28/02/2023 Dhaka, Bangladesh

Junior Software Engineer Errorcross IT Company Ltd

Software Engineering and Development, Artificial Intelligence and Machine Learning, Data Science and Big Data Analytics, Computer Vision and Image Processing, Internet of Things (IoT) and Embedded Systems, Internet of Things (IoT) and Embedded Systems, Human-Computer Interaction (HCI)

EDUCATION AND TRAINING

01/09/2016 - 20/06/2020 Xianlin Campus, Nanjing City, China
Bachelor of Computer Science & Technology Nanjing University of Posts and Telecommunications

Address No.9, Wenyuan Road, Yadong New District, Nanjing, Jiangsu, China,

01/06/2012 - 13/08/2014 Rajshahi , Bangladesh
HIGHER SECONDARY CERTIFICATE (HSC) Evergreen Model College, Rajshahi

Address Rajshahi , Bangladesh

01/01/2009 - 07/05/2012 BHERAMARA, KUSHTIA, Bangladesh
SECONDARY SCHOOL CERTIFICATE (SSC) Damukdia Secondary School

Address Bheramara, Golapnagar-7040,Kushtia, BHERAMARA, KUSHTIA, Bangladesh

LANGUAGE SKILLS

Mother tongue(s): **BENGALI**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH C1		C2	C2	C1	C2
CHINESE B2		B1	B2	B1	B1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

DIGITAL SKILLS

Microsoft Office | Microsoft Powerpoint | Social Media | Zoom | Facebook | Microsoft Excel | Google Docs | LinkedIn

ADDITIONAL INFORMATION

COMMUNICATION AND INTERPERSONAL SKILLS

Excellent verbal and written communication skills Excellent verbal and written communication skills in academics, office management, and with the scientific community throughout the world. Excellent presentation skills in both national and international conferences ...

Event management Skills Very good organizational and professional skills in handling departmental tasks as the head of the department. Having experiences in administrative affiliation like assistant provost of student residence house and assistant proctor of the university

CREATIVE WORKS

Computer skills Internet, Web Searching, Networking Systems, Python Programming, SQL, Cyber security, Deep learning, Neural Networks, Logic circuit software, Microsoft Word Document, Microsoft Excel Worksheet

PUBLICATIONS

1. A Low-cost IoT based Home Security System using computer Vision - 2018

Md Mamun Ali, Bai X., et al., "A Low-cost IoT based Home Security System using computer Vision," The 7th International Conference on Frontiers of Intelligent Computing: Theory and Application (FICTA 2018), Da Nang, Viet Nam, November 2018, accepted for publication.

[https://link.springer.com/chapter/ 10.1007/978-981-13- 9920-6 17]

Theory and Application (FICTA 2018), Da Nang, Viet Nam, November 2018, accepted for publication

2. Design and Implementation of Aurdino Based Air Quality Measurement Meter with Digital Dashboard on Smartphone Using Blynk– 2019

HONOURS AND AWARDS

01/09/2016

Nanjing University of Posts & Telecommunications Merit scholarship award – Nanjing University of Posts & Telecommunications I got this award in 2016, 2018, 2019

RECOMMENDATIONS

Dr. Chen Wei Professor

I know them for several years. He is wonderful in the IT sector. I strongly recommend

Email chenwei@njupt.edu.cn | **Phone** (+86) 18951896489

Qiu Xiaohui Professor

I know them for several years... She/he/they are fonderful in ....I strongly recommend

Email Qiuxh@njupt.edu.cn | **Phone** (+86) 13382033510

Xiping Liu Professor

I know them for several years... She/he/they are fonderful in ....I strongly recommend

Email xpliu.njupt@163.com | **Phone** (+86) 13914784656

ANNEX- SUBJECTS STUDIED

01/09/2016 - 20/06/2020

Bachelor of Engineering (BSC)-

Software engineering, Advanced Unix Programming, Design & Analysis Of Algorithms, Technology Of Information security, Computer Organization, data structure, Operating System, Database System, Principle of Communication, Analog Electronic Circuit, Computer Communication Networks, Information Theory, High-Level Language Programming, Digital Circuit and Logic Design, Computer Graphics, Embedded System & Development, Advance Mathematics-1, Advance Mathematics-2, Linear Algebra and Analytic Geometry, C hinese Society and Culture (1), Chinese Society and Culture (2), University Physics (I), C++, Programme Design, Introduction To Computer Science & Technology, Chinese Language (I), Chinese Language (2), Physics Experiment (1), Chinese Martial Art, University Physics (2), Electro-technical & Electronic Experiment, Discrete mathematics, Analog Electronic Circuits, Physics Experiment (2), Signals and Systems, Java Programming, Probability Statistics and Random Process, Cognitive Practice, Digital Circuits and Logic Design, Data Structure

01/03/2020 - 05/06/2020

Thesis Title: Convolutional Neural Network Based Network Attack Traffic Analysis

Statement of Purpose

MD MAMUN ALI
PhD in Computer Science Applicant
Columbia University

Growing up, technology was my allure — a passion that fueled me through my education and career. Just seeing how machine learning, artificial intelligence (AI) and the Internet of Things (IoT) are penetrating industries as well as everyday life made me jump into these areas with both feet. I am graduated from Nanjing University of Posts and Telecommunications (NJUPT) with a Bachelor degree in Computer Science and Technology, during the period at university, I developed my interest for those areas and practices on them then prepared to further study. Now, I am excited to continue my journey as a PhD student in Computer Science at Columbia University.

Academic Foundations

I learned the basics of computer science theory during my Bachelors, and to make a story short it gave me theoretical understanding but also the practical part. There, during my studies at NJUPT I also got an idea of basic programming (C++/Python) and went through the basics and more advanced aspects of Networking, IoT, embedded systems. I also stood as topper in my class of 2020 with a CGPA of 3.23 and while all through schooling I had happened to secure good grades but what really intrigues me is researching about AI, Machine learning & cybersecurity with a special interest focusing on its IoT use cases.

I have done academic work where I did research in areas of what were then and are now new technologies, and (when possible) implemented these systems on data or in other real-world problems. One of the main was "Low-cost IoT based Home Security System using Computer Vision" in 7th International Conference - Frontiers of Intelligent Computing, Volume 1, pp: 101–106; Alliance University, Bangalore, India. The project also shows the difficulties of creating: intelligent gadgets by only supplementing these with IoT unit and promotes outran my involvement in IoT security.

Research Experience

In addition to what I learn in my classroom, The research projects that I have been involved with has played a critical role in determining my areas of interest and goals for research. In my undergraduate, I started exploring the domain of AI and machine learning. It was a research project concentrating on convolutional neural networks (CNNs) for network traffic analysis which was my first practical experiences. The aim of this project is to create smarter deep learning solution that can detect even smallest anomaly in data samples which are coming out from packet sniffer before cyberattacks happens. It was this experience that led me to delve into the world of AI and cybersecurity, especially when it comes to securing IoT networks with existing connected devices and the new vulnerabilities they open.

This project also gave me one of the major insights, how we can work with big data and building robust machine learning model. As part of my study, I have investigated in one way how CNNs can be tailored for modeling network traffic data that should help to precisely recognize patterns

indicating threats. It is not just helped me to understand neural network but also opened my eyes/ reminded how important cyber security must be in a world where we are surrounded by IoT system.

The complexity of security in IoT applications manifests itself on several levels, including hardware and software deficiencies. But as I kept exploring, I got intrigued about how deep learning models could be employed in this area. Given the constrained nature of IoT devices, challenges arise that make it difficult to ensure IoT-Crypto measures are lightweight enough. My research experiences on CNNs and anomaly detection build strong fundamental for me to dive deeper in these challenges; which is why I am so passionate about pursing my PhD in this area.

Professional Experience

Apart from a solid academic and research profile, I have been acquiring meaningful industry experience and this has had an additional impact on my research objectives. I joined Errorcross IT in Dhaka, Bangladesh as a Junior Developer after my graduation. It allowed me to put my programming skills to work in the real world, helping develop software solutions for clients. I was responsible for working with cross-functional teams in order to design and develop software applications, which helped sharpen my capabilities in problem solving within tech stacks and working under aggressive timelines.

My stay in Errorcross IT further showed me that software solutions need to have cybersecurity tightened with lots more space for improvement. As part of my job, I worked on consumer data privacy and secure software systems. This experience confirmed my belief that cybersecurity is an indispensable part of the collection of modern technologies and I wanted to enhance myself in IoT security setting using AI/ML solutions.

From there I joined the Tech firm Errorcross IT before taking a role as Global Gaming Business Development Manager at Transsion, a leading tech company in emerging market. Although these roles were more business focused, I did gain a lot of insight into the global Technology world. In this role, I had the privilege of working across a range of countries to build those relationships with partners, understand market trends and create plans for Transsion global growth in gaming. It gave me the opportunity to use my technical skills that I used on a daily basis work, mixed it with some business and opened myself up to become much smarter in seeing how technology is being adopted across various markets.

The most important lesson I learned during my time at Transsion is that AI and IoT are disrupting infinite number of industries globally. On the big picture — it was also a great opportunity to see how IoT and this marketplace environments are growing across Emerging Markets, as new problems related to being Open, to scale and secure came out. This experience solidified my interest in researching methods to overcome those issues — most notably, securing the behind-the-meter IoT systems from cyber security threats.

Research Interests and PhD Goals

I am particularly interested in undertaking research at the intersection of machine learning, artificial intelligence and IoT as I start my PhD journey. This includes my passion for working with deep learning models to optimize the security of IoT systems as they continue to take center stage in both in industry and everyday life. With the explosion of IoT devices, new types of security vulnerabilities are continually emerging: measures that have been proven capable of being bypassed in different situations. And I hope to join this wave making of knowledge, but now what I see is the future of Internet of Things security is to use AI & ML for the real-time threat detection and response.

The primary difficulty protecting the IoT systems is that so many devices are resource constrained. Traditional security measures like encryption and intrusion detection are hard to come by in the case of IoT devices, which usually run-on low processing power and memory. Given this phenomenon, I am conducting research on how deep learning models in the context of IoT networks specifically enhanced for lite environments, operate with exploitation to identify malicious activities instigated within an IoT network so that potential threats can be redirected immediately before causing serious injury.

The program at Columbia University is best suited to carry out this research. With a very strong cross-disciplinary focus and presence of top faculty in AI, machine learning, cybersecurity, this university was also an ideal place to investigate the good and potential of IoT security. Working with faculty who are leaders in AI and Data Science research would give me the direction and tools to make innovative contributions.

Why Columbia University?

One factor that has attracted me to its PhD program in Computer Science is Columbia University's rich history as a premier research institution. I believe that the university provides me with an ideal platform, given its commitment in promoting innovation and interdisciplinary collaboration for me to achieve my research objectives. But I am especially interested in Columbia's leading AI research groups, on the forefront of machine learning, deep learning and cybersecurity. Such an experience will give me the required exposure working with faculty and students interested in AI, the passion of my life and its applications in cybersecurity to be equipped with necessary guidance and motivation as I get myself set for scientific research.

This is further bolstered by the diverse industries available through Columbia´s New York City location as well as research opportunities. New York is a hotbed of tech innovation, and I look forward to working with researchers and professionals in the city. New York city is known for its thriving tech scene and marrying the opportunities offered by Columbia with the rich ecosystem in New York would be conducive to my skill development, and allow me to contribute meaningfully to computer science.

Long-term Goals

I'd love to be a leading researcher in AI and cybersecurity, focusing on IoT security eventually. The emergence of IoT as the basis for new industries and every-day occurrences in a connected world, playing its part in unlocking some untapped realms of innovation. However, I also realize

that they must be secure as the full usefulness of these systems can only be realized if they are all plugged in. I started looking at ways to implement new security protocols driven by AI and machine learning solutions to make IoT networks safe from a wide variety of cyber threats through my work.

Like research, I am enthusiastic & committed to being a teacher who inspires in the heart of those computer scientists. To me, academia essentially provides an exception of a hall in which we can attempt to instill and promote the research interests and skills of students. Looking forward, I am thrilled to work as a PhD student at Columbia University and will aim to both carry my research further and help the academic community through teaching and mentoring.

Conclusion

Finally, I am confident that my academic preparation, research experience and professional career have allowed me to be well suited for the demands of a Ph.D. at Columbia University. I look forward to working in the universities diverse and thriving research environment, with faculty at the very cutting edge of AI, machine learning and cyber security research. I would therefore of course also hope to be accepted because I really believe that the PhD program in computer science at Columbia University is an ideal place for me to gain the relevant skills, resource and support needed pursue my research vision effectively and contribute significantly to this field.

Thank you for even looking at my request.

Sincerely,
MD MAMUN ALI