

A. H. M. Rezaul Karim

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📧 A. H. M. Rezaul Karim - Portfolio

✉ rezaulkarim@iut-dhaka.edu

🐙 AHMRezaul - Github

in A. H. M. Rezaul Karim - LinkedIn

ACADEMIC CREDENTIALS

Islamic University of Technology (IUT)

Bachelor of Science in Computer Science and Engineering

CGPA: 3.87 out of 4.00

Gazipur, Dhaka, Bangladesh

January 2017 - March 2021

(3.98 in last semester)

RESEARCH EXPERIENCE

Undergraduate Research Work

January 2020 - January 2021

Islamic University of Technology (IUT)

Thesis Topic: “Attack Step Prediction of Targeted Attacks using Deep Learning”

- A deep learning model built using LSTM architecture in order to predict the attack tactics and techniques used by the adversaries in case of a targeted attack.
- The model uses MITRE ATT&CK Framework to formulate the attack steps containing the tactics and techniques in order to perform the prediction from a high level perspective.
- The prediction model achieved around 86% accuracy in determining the next step in a targeted attack.

Supervisor: Prof. Dr. Muhammad Mahbub Alam

Research Interests:

Cyber Security, Machine Learning, Network Security, Networking, Cloud Security, Cryptography

PROFESSIONAL EXPERIENCE

Samsung Research and Development Institute

Dhaka, Bangladesh

Software Engineer Intern

November 2019 - January 2020

- Worked on improving and developing the library of a renowned mobile application on android platform along with implementing a number of different APIs.
- Created an android application called ‘Clock’ by utilizing the newly implemented APIs.

PROJECTS

Multi-Label Genre Classifier

PyTorch, Numpy, Pandas, FastAI

- An approach towards building a deep neural network architecture that uses both spatial and temporal information.
- A pre-trained Resnet50 model for image data and a pre-trained LSTM model to encode and train the text model were implemented using transfer learning principles along with pooling and custom neural network layers.
- The Multi-Label Movie and TV Series Genre classifier uses the Title Poster and Plot Summary to determine the genre with an accuracy of 85%.

SnapLeaf

TensorFlow, Java, Python

- An android based mobile application built using deep neural network architecture that can classify different leaf disease from a captured photograph.
- The model was developed using the Inception v3 architecture which was later imported in the android application.
- The application shows significant performance in correctly identifying 30 different leaf disease with an accuracy of 80%.

Robotic Hand with 6 DOF

Arduino Uno, Servo motors, Python

- A robotic hand built using servo motors and Arduino Uno as the main components with a steel frame.
- It can be used to perform basic hand movements that can lift a small object and is controlled using a remote controller application from any mobile devices or computers.
- The robotic hand contains 4 servo motors to allow it the six degrees of freedom along with the claw movements.

Martsy

JSP/JSTL, Spring Framework, Servlet

- An online e-commerce web application for purchasing and selling different commodities.
- The web application contains a secure payment gateway implemented using the Spring Framework.
- The Admin login system allows addition or removal of items and the User login system is used for browsing and shopping.

****Remaining projects are available on my [Github](#)**

TECHNICAL SKILLS

Languages:	C/C++, Java, Python, PL/SQL, JavaScript, HTML/CSS, JSP/JSTL
Frameworks:	TensorFlow, PyTorch, Spring Framework(Web programming)
Tools & Software:	Cisco Packet Tracer, Network Simulator(ns-2), Android Studio, IntelliJ, Eclipse, PyCharm, Google Colaboratory, Git, SQLite, VS Code
Cloud Platforms:	Microsoft Azure, AWS, Firebase
Libraries:	Scikit-Learn, NumPy, Matplotlib
Miscellaneous:	LaTeX, Microsoft Word, Microsoft Powerpoint, Blender 3D

STANDARDIZED TEST SCORES

Test of English as a Foreign Language (TOEFL) - 27th July, 2021

Overall	Reading	Listening	Speaking	Writing
107	27	29	24	27

Graduate Record Examination (GRE) - 22nd December, 2020

Total	Quantitative	Verbal	Analytical
318	163	155	4.0

EXTRACURRICULAR ACTIVITIES

Treasurer

IUT Computer Society (IUTCS)

- Organiser of 9th and 10th IUT ICT Fest.
- Organiser and coordinator of Android Development and Web Development Sessions by IUTCS.

Logistics and Operations Executive

IUT Career and Business Society (IUTCBS)

- Organiser of IUT Hult Prize 2019 competition.
- Organised various seminars and sessions on business case studies and career opportunities.

REFERENCES

Prof. Dr. Muhammad Mahbub Alam

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