



Md. Abdur Razzaq Riyadh

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EDUCATION

- 2016 – 2020 **B.Sc. in Computer Science and Engineering**
University of Asia Pacific, Dhaka
• CGPA 3.70 out of 4.00
• Dean's Honor List - Fall 2018, Fall 2019
- 2013 – 2015 **Higher Secondary Certificate**
Dhaka College, Dhaka
• GPA 5.00 out of 5.00
• Head of ICT, Dhaka College Science Club
• Sub-executive of ICT, Dhaka College Science Club
- 2011 – 2013 **Secondary School Certificate**
Motijheel Model High School and College, Dhaka
• GPA 5.00 out of 5.00

PROJECTS

- 2016 **Hyperdrive**
An infinite runner game. The player controls a spaceship to avoid incoming asteroids.
Developed under a week,
Platform: Web, Windows, Android
Tools: Unity, C#
- 2018 **Temp Note**
An android note app that lets the user create, read, edit, delete notes.
Platform: Android
Tools: Java
- 2019 **Sentiment Analyzer**
A web app offering Sentiment Analysis of food reviews using deep neural networks. Built using Flask.
• Trained on Amazon Food Review dataset.
• Used Keras for implementing LSTM
• Training and test accuracy are respectively 0.82 and 0.75
• Deployed the pickled models on Heroku as a Flask app.
Platform: Web
Tools: Python, Flask Framework
- 2020 **Bengali Tag Suggestion System Implementation**
Deep neural network based keyword suggestion system specifically for Bangla News Documents. Part of undergraduate thesis.
• Trained a dataset of around 4M Bengali news article and title.
• LSTM layer with word embedding as features.
• Dealt with dataset bias with class weights.
• The model achieved about 69% accuracy on user survey.
Tools: Python

2020 **Movie Recommender using Collaborative Filtering**

Trained on MovieLens 100K dataset, the model can recommend movies based on user to user correlation.

- Implemented collaborative filtering with non-negative matrix factorization from scratch only with Python.

2020 **Corona Fact Checker**

Along with a few researchers, contributed to a machine-learning based COVID-19 related fact checking system. It is designed to identify and extract individual Facebook posts and then show a report on its authenticity. This is an active project. I have contributed the followings,

- Query to Database similarity by using Word Embedding with Gensim.
- Maintaining and partially designing MongoDB database on Heroku.
- Creating Flask API to communicate with Chrome Browser Extension.
- Creating a popup for Facebook that alerts users with the latest viral fake-news.

Tools: Python, JavaScript, Chrome Web APIs

2020 **ICU Prediction for COVID-19 Patients**

The model predicts if patients need ICU or not within 12 hours of hospital admission, based on their information from the first 6 hours into the admission. This is to assist doctors in making the diagnosis early which helps with beds and resource allocation during the pandemic.

- Dataset of COVID-19 patients from 3 hospitals in Brazil.
- Basic data analysis to figure out which features are most important to make the prediction.
- Extra features generated from existing features to understand if a patient's condition is stable or not.
- AUC-ROC around 0.85 with a maximum achievement 0.89.

SKILLS

Languages

Python, C++, JavaScript
SQL, CSS, HTML
Bash Scripting

Softwares / Frameworks / Libraries

Tensorflow, Keras, Matplotlib, Numpy, Pandas, Sci-kit Learn
VS Code, Vim
Heroku, MongoDB, Jira, Flask

Hardware

Arduino

Version Control

Git

Soft Skills

- Self-starter
- Eager to learn
- Passionate about new techs

COMPETITIVE PROGRAMMING

2017-2018 **UVA Online Judge, Sphere Online Judge, LightOJ, Codeforces**

Academic knowledge on-

- Graph algorithms,
- Searching and Sorting,
- Number theory, and
- Data Structures

2019-present **Kaggle**
Learning while implementing various ML algorithms to perform exploratory data analysis as well as regression and classification problems.

ACHIEVEMENT & CERTIFICATION

- 2016 **Mobile Game Graphics Design**
From the Information and Communication Technology Division, Government of the People's Republic of Bangladesh. Under the Capacity Building for Mobile Game Development Program.
- 2016 **Advanced Mobile Game Development**
From the Information and Communication Technology Division, Government of the People's Republic of Bangladesh. Under the Capacity Building for Mobile Game Development Program.
- 2017 **Inter University Software and Hardware Carnival 2017**
Participated in the Software Exhibition section of the carnival arranged by UAP Hardware and Software Club.
- 2018 **Idea Workshop for Mobile Games & Apps Development**
A workshop held on creative idea boosting for Mobile Games and Apps, organized by the ICT Division, Government of the People's Republic of Bangladesh.

RESEARCH INTERESTS

Statistical Learning, Deep Learning, Natural Language Processing

OTHER

Technical Blog

Write about different algorithms and exploratory data analysis on a technical blog. Link to the blog: riyadhrazzaq.github.io