Md. Aminul Islam

Email : aminul7506@gmail.com   Github : https://github.com/aminul7506
Mobile : +8801750903875   Skype, LinkedIn, Twitter
Website : https://aminul7506.github.io

RESEARCH INTERESTS

Software Engineering, Machine Learning, Natural Language Processing, Computer Vision

EDUCATION

B.Sc. in Computer Science and Engineering   Jul. 2014 to Oct. 2018
Bangladesh University of Engineering and Technology(BUET), Dhaka, Bangladesh
CGPA : 3.57/4.0 (Major : 3.6/4.0, Last 3 terms(58 credits) : 3.85/4.0)

RESEARCH EXPERIENCE

Scene Reconstruction From Multiple Static CCTV Cameras   Nov. 2017 to Oct. 2018
Undergraduate Thesis, Full Thesis Book
Supervisor : Dr. Md. Monirul Islam, Collaborator : Anwar Hossain
Tools : MATLAB, SURF(Speeded Up Robust Features), Object Detection & Tracking Algorithm, Image Segmentation, Image Matting, Polyfit

- proposed a system that can present information of a human or an object to user by analyzing videos taken from multiple static CCTV cameras from area of interests
- developed a prediction algorithm for predicting the movement of an input object in the place of defective or unavailable cameras inside the area of interests using the object's velocities in different cameras
- can recognize the input objects from different cameras with movement prediction in the place of defective or unavailable cameras

WORK EXPERIENCE

Software Engineer, Ridmik Labs, Dhaka, Bangladesh   Nov. 2018 to present

- **Ridmik+ (Secured android messaging and social platform app)**
  Tools : XMPP(Extensible Messaging and Presence Protocol), Signal Protocol, ejabberd api, AES encryption, Android Studio, Java, Kotlin, SQL
  - worked in developing XMPP based one to one and group messaging, end-to-end encrypted messaging and different security issues of the application
  - working in the continuous development of the app specially on the messaging part
- **Bangla Article Summarizer (Research Project)**
  Tools : Python, NLTK, Clustering Algorithm, Bangla words dataset
  - performed research on making an extractive Bangla article summarizer for Bangla news articles
  - worked for developing Bangla article summarizer after research using TF-IDF, our prepared Bangla words dataset with Parts of Speech tagger and K-means clustering
- **Boitoi (Android eBook Reader)**
  Tools : Android Studio, Java, Kotlin, Java Native Interface, C, SQL, JavaScript, HTML, CSS, XML, AES decryption, ReadiumSDK
  - worked for developing secured eBook reader with in-app book store, many other functionalities and working as one of a programming advisors
  - performed research for the security(standard encryption and decryption) of how books will be stored in a user's android device and decrypted in the device
- **Boitoi (iOS eBook Reader)**
  Tools : Xcode, Swift, Objective-C, C++, JavaScript, HTML, CSS, GRDB, StoryBoard, AES decryption, ReadiumSDK, iOS keychain
  - worked for the whole development of secured eBook reader with in-app book store
  - performed research for the security(standard encryption and decryption) of how books will be stored in a user's iOS device and decrypted in the device
- **Ridmik Keyboard (Android)**
  Tools : Android Studio, Java, Kotlin, C, Java Native Interface

– worked on fixing some bugs, design changes, and implementing some new features
- **Ridmik Account Kit Library**
  Tools : Android Studio, Java, XML, Xcode, Swift, StoryBoard, iOS Keychain
  – worked for developing Ridmik Account Kit Library(used for login to any Ridmik app) for both android and iOS application

Programmer of AIST Project, Department of CSE, BUET   May 1, 2021 - July 31, 2021

AIST Demo Project is a web application for demonstrating real life application of AIST (An Interpretable Attention-based Deep Learning Model for Crime Prediction) paper(preprint)
Tools : Django, Python, SQLite, HTML, CSS, Javascript, jQuery, REST API, tkinter
– worked in developing backend, rest api, frontend and an admin panel for uploading crime data in server

More Details about work experience

ACADEMIC PROJECTS (SELECTED)	**Stay Safe Application(Android) :** Apr. 2017 to Jun. 2017

Stay Safe Application(Android) :   Apr. 2017 to Jun. 2017
Tools : Android Studio, Java, Firebase, Google Map API, SQL, Push Notification, Github Code
- reporting for crimes, crime alert, connecting with nearby police station, friends for user
- verification for reported crimes and marking danger areas by police, connecting police with victims

Multivariate Stock Price Prediction :   Jul. 2018 to Aug. 2018
Tools : Keras API, Tensorflow Backend, LSTM(Long Short Term Memory), one year share market data for training, Github Code
- developed a model which can predict the starting price for next day share market

Online Examination (Web) :   Nov. 2016 to Dec. 2016
Tools : JSP Servlet, Java, Oracle, Github Code
- developed a web application from which students can give exams on both MCQ and descriptive type questions, teachers can upload questions, check answer scripts

INDEPENDENT PROJECTS (SELECTED)

Rapid Roll (Android) :   Aug. 2016 to Sep. 2016
Tools : Android Studio, Accelerometer, Java, Canvas, Github Code
- developed a rapid roll game with user's lives, increased gaming speed over time, scores

Notebook (Android) :   Dec. 2015 to Jan. 2016
Tools : Android Studio, Java, Github Code
- developed a notebook application from which user can save, edit and delete one's writings

Car Racing Game :   Mar. 2016 to Apr. 2016
Tools : Unity 3D, C#, Github Code
- developed a small car racing game which has android, iOS and desktop version

All Other Projects and More Details

SELECTED COURSEWORK

- Artificial Intelligence
- Machine Learning
- Digital Image Processing
- Pattern Recognition
- Software Engineering & Information System Design
- Operating System
- Computer Graphics

SKILLS

Programming Languages : Java, Python, Swift, C, C++, Kotlin, Objective-C, Assembly(80X86)
Scripting Languages : JavaScript, HTML, CSS, MATLAB, Shell Scripts
Mobile Application Development : Android, iOS
Frameword : Django
Database : Oracle, SQL
Tools & Others : Keras, Tensorflow, NLTK, Google Map API, Google Vision API, Firebase, JNI(Java Native Interface), JavaFX, LaTeX, tkinter