AHNAF FARHAN

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EDUCATION

PhD in Computer Science
University of Texas at El Paso

📅 Aug 2017 – Present

- CGPA: **3.91**
- Expected graduation in **May 2022**

BSc. in Computer Science & Engineering
Shahjalal University of Science & Technology

📅 Jan 2011 – Aug 2015

- CGPA: **3.60**

EXPERIENCE

Computer Vision
Researcher at Discovery Analytics Lab (University of Texas at El Paso)

📅 Aug 2018 – Present   ♀ El Paso,Texas

- Developed low dimensional contextual vector representations of visual objects from video data. A single hidden layer neural network is utilized to optimize the proposed objective function.
- **Development Environment:** Python, Keras, tensorflow, Scikit-learn, YOLOv4.
- The achieved cluster consistency score is **0.56** on **COCO** dataset and **0.66** system-human correlation score on **Scene250** dataset.
- The applications of video Object embeddings are video summarizing, ads placement in video, event categorization and prediction.
- Research work is submitted on IEEE Big-Data 2020.

Natural Language Processing
Researcher at Discovery Analytics Lab (University of Texas at El Paso)

📅 Aug 2017 – Present   ♀ El Paso,Texas

- Contextual temporal word embeddings using diffusion to capture long and short-term shifts of word's context over time.
- A Neural Network with single hidden layer is trained using objective function that incorporates temporal tf-idf of words.
- **Development Environment:** Python, Tensorflow, Spacy, SciSpacy.
- Capturing evolution of words over time will allow us to model news-events prediction, stock market prediction, etc.
- Research work is submitted on IEEE Big-Data 2020.

Search Engine
Software Engineer at Chorki

📅 Sep 2015 – Apr 2016   ♀ Dhaka,Bangladesh

- Build a customized search engine for product and news search.
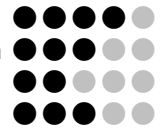- **Development Environment:** Java, Servlet, Apache Nutch, Apache Solr.

TECHNICAL SKILLS

C/C++, Java, Python ●●●●○
TensorFlow, Keras, Scikit-learn ●●●●○
Android, Servlet, JSP, Git ●●○○○
Orcle 10g,MySQL ●●●○○

PROJECTS

SUST Backgammon
- SUSTBackgammon game for Artificial Intelligence project using Minimax Algorithm.
- **Development Environment:** JAVA SE,SWING
- Source Code: `https://github.com/Rownak/SUST_BackGammon`

Clustering Stackoverflow User
- Cluster similar users of the StackOverflow website depending on the programming language usage and debugging queries.
- **Development Environment:** Java, StackOverflow API
- **Source Code**: `https://github.com/Rownak/StackOverflowMining`

Document Similarity and Plagarism Finding
- Plagiarism finding to track similarity between students assignment using Term-Document frequency.
- **Development Environment:** Java
- **Source Code**: `https://github.com/Rownak//DocumentSimilarityFinding`

Tourist Friend
- Android app to help tourists find popular tourist spots, pictures, and general information of the venue.
- **Development Environment:** Android, Servlet, and Hibernate
- **Source Code**: `https://github.com/sajjadIslam2619/TouristFriend`

PUBLICATIONS

- "Diffusion-Based Temporal Word Embeddings". (submitted for publication)
- "VizObj2Vec: Contextual Representation Learning for Visual Objects in Video-frames". (submitted for publication)
- A technical report on "Why Max and Average Poolings are Optimal in Convolutional Neural Networks", 2018.
- "An efficient way for segmentation of Bangla characters in printed document using curved scanning," 5th International Conference on Informatics, Electronics and Vision (ICIEV), 2016.