Farjana Sultana Samia

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OBJECTIVES

To pursue a challenging and research-oriented career in the fields of Artificial Intelligence, Machine Learning, Deep Learning, Data Science, Natural Language Processing.

RESEARCH INTERESTS

Artificial Intelligence(AI) — Machine Learning(ML) — Natural Language Processing(NLP) — Data Science(DS)

STANDARDIZED TEST

TOEFL iBT : Total Score: 68 (Reading-11, Listening-20, Speaking-20, Writing-17)
Revised GRE : Total Score: 296 (Verbal-139, Quantitative-157, Analytical Writing-3.0)

EDUCATION

B.Sc. in Computer Science and Engineering (Feb 2017 - Jan 2022)
Manarat International University(MIU)
CGPA: 3.90 out of 4.00
Thesis: Prediction of COVID-19 from Chest X-ray Images Using CNN And Pre-Trained Models

Higher Secondary Certificate (2014 - 2016)
Shaheed Bir Uttam Lt. Anwar Girl's College(SAGC)
GPA: 5.00 out of 5.00

Secondary School Certificate (2012 - 2013)
Uttara High School and College(UHSC)
GPA: 5.00 out of 5.00

PROFESSIONAL EXPERIENCE

Assistant Teacher (January, 2022 - Present)

- Math & Science Teacher
- Uttara Model Academy(UMA)
- Responsibilities:
  - Conducting 5th to 8th grade classes
  - Creating Math and Science questions

IT Expert (April, 2022 - Present)

- IT Support Expert
- Bonnie Store (E-commerce site)
- 20 hours per week(Remote job)
- Responsibilities:
  - Solving Bonnie Store website technical issues

- Developing new themes
- Website designing

TECHNICAL SKILLS

- **Programming Languages:** C/C++, C sharp, R, Matlab, Python
- **Deep Learning Libraries:** Tensorflow, Keras, Numpy, OpenCV, Matplotlib, Pandas.
- **Web Technologies:** HTML, CSS, Bootstrap, Asp.net, Python(Flask)
- **Data Science:** Web Scraping, Selenium

PROJECTS

Project 1 CIFAR-10 - Object Recognition in Images (Computer Vision) GitHub

- Object Recognition in CIFER-10 Images(CIFAR-10 dataset consists of 60000 32x32 colour images in 10 classes).
- Using Python Keras library.

Project 2 Data Visualization using Seaborn (Breast Cancer Diagnostic data.) GitHub

- Features are computed from a digitized image of a fine needle aspirate (FNA) of a breast mass. They describe characteristics of the cell nuclei present in the image.
- Observing all Pair-wise Correlations.
- Observing the Distribution of Values and their Variance with Swarm Plots.
- Using Joint Plots for Feature Comparison Using Python Seaborn library.

Project 3 Flask based University CGPA system website GitHub

- This semester grading system is using on Python Flask for software developing.
- I've used here Bootstrap and java scripts for designing the website.

Project 4 Basic Face Detection using CNN GitHub

- I have applied a simple Transfer Learning model using python on my nephew's happy and sad photos
- It can detect my nephews happy and sad face properly.

RELEVANT COURSEWORKS

Undergraduate Courses:

- Structured Programming (C), OPP (Java), Data Structures, Algorithms, Statistics and Probability, Database Systems, Operating Systems, Software Development, Computer Graphics, Internet and Web Programming (HTML, CSS, Java Script, PHP), Computer Networking, Artificial Intelligence, Neural Networks and Fuzzy Systems, Pattern Recognition, Computer Vision and Robotics.

Courses:

- **Ishraak Solutions Limited** -Machine Learning
- **Coursera** - Data Science Math Skills

EXTRA-CURRICULAR ACTIVITIES

- **Microsoft Bangladesh**, *Brand Ambassador* (A Certificate of Recognition Brand Ambassador. Microsoft targets the youth and provides a platform for the people)(Aug 2018 - Dec 2018)
- **Young Bangla**, *Campus Ambassador* (With the motto "Connecting the Dots ", becomes a young talent to promote, share and spread out youth towards my community.)(Aug 2018 - Dec 2018)
- **Women Techmakers**, *Volunteer* (Spreading and Developing women are technologically strong through this team)(Jan 2017 - Mar 2019)

RESEARCH EXPERIENCE

Bangla Text Document Categorization

- I am currently working on a Natural Language Processing (NLP) based research work. Automatic document categorizing is an emerging research area in the field of NLP. In this categorization, I am using various Deep Learning and Machine Learning Models.

Undergraduate Research Work (Using Python)

- **Thesis Title:** Prediction of COVID-19 from Chest X-ray Images Using CNN And Pre-Trained Models
- **Brief :** Comparing Convolutional Neural Network And seven Pre-Trained Models performance using a single data-set which is "COVID-19 Radiography Database". Among all pre-traind models we got highest accuracy result from VGG-16 and EfficientNetB0 got the lower accuracy result.

TOOLS/SOFTWARE

- Github, VS Code, SPSS, Jupyter Notebook, Pycharm, Matlab, Photoshop, SQL Server, OS (Ubuntu, windows)
- **Document Processing:** LaTeX, MS Office, Adobe Illustrator, OriginPro.

REFERENCE

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