

Koushik Ahmed Kushal

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ABOUT ME

I'm Koushik Ahmed Kushal, a **machine learning practitioner** with experience in various tools and contributions to industry and academic research advances.

EDUCATION

American International University, Bangladesh
Computer Science and Software Engineering
CGPA: 3.21 on a scale of 4.00

UNDERGRAD RESEARCH AND PROJECTS

Document Generation With Bidirectional LSTM and Attention Layer. (NLP)

8-layer Bidirectional LSTM network that takes inputs stream of text (n-1 gram) and outputs(final word index) a document, based on input. Incorporated Shakespeare and wiki dataset, trained with self-attention based Bidir-LSTM.

Underwater Object Detection and Localization. (Computer Vision)

This project was undertaken to find critically endangered underwater coral and its family. Developed a deep cnn on top of ResNet architecture and trained 23m parameters with IOU and NMS to detect the object and its location.

Image-Based Air Quality Index Estimation with Emphasis on Low PM2.5 Concentrations

On top of 13,000 outdoor images of India and Nepal designed a CNN model with pretrained ResNet-50 to estimate PM Concentrations through meteorological feature and estimate air quality index with CNN + Regression model.

WORK AND INTERNSHIP

Machine Learning Intern - Infosys Limited, Bangalore

June 2019 -Sept,19

Detects Failing Server Logs (anomalies) On High-Dimensional Distribution. (EDA+ML)

It's an unsupervised machine-learning model with high dimensional data. Generate a threshold for selecting outliers in the validation set. To get the optimal epsilon used p-value to compute the best f1 score.Fitting data on Gaussian distribution and generating the best possible outlier(anomaly).

Machine Learning Engineer, Upwork Inc.

Apr 2021 -Present

Deal with issues with **data analysis, data visualization, preprocessing, modeling**, and research domain tools.

Collaborate with clients and supervisors for building sketches and development.

Design prototype and final application to **deploy in web server and mobile applications**.

Contributed to **six different machine learning projects** to date in the **Audio, Computer Vision, and NLP** domains.

RECENT WORK

Visual Question Answering With Deep (Sequence to sequence + CNN) Neural Net

VQA mapping sequence to sequence input to visual features and shaping two (NLP+CNN) networks as for inputs to outputs.Inherits transfer learning for feature extraction with 1.6 m parameters of conv-avgpool-embedding-lstm layer.

AWARDS AND CERTIFICATIONS

The Duke Of Edinburgh Award, Bronze

Deep Learning Specialization, Coursera

AI for Medical Specialization, Coursera

Machine Learning, CS229 , Stanford University

SKILLS

coding : Python, Javascript, java,C++, SQL, HTML & CSS3

Tools : Jupyter Notebook,Gradio,Flask,**Anaconda**,Vscope

RESEARCH INTEREST

MACHINE LEARNING

| **DEEP LEARNING**

| **DATA SCIENCE**

| **COMPUTER VISION + NLP**

TEST SCORE

IELTS : OVERALL: 6.5 SPEAKING: 6.5 READING: 6.0 WRITING: 6.0 LISTENING: 6.5