

Devansh Sharma

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WORK EXPERIENCE

Machine Learning Intern, *Fellowship.AI - Remote*

Apr 2022 - Jul 2022

- Developed and designed a pipeline that identifies one of 8 classes that incorporates different states of working out such body weight bearing, aerobic, stretching etc with 96.7 percent accuracy
- Employed the use of Mediapipe or BlazePose that extract 3D coordinates per frame with normalized output between 0,1 and used these data points to train a Extra Trees classifier for activity classification.
- Introduced RepNet for counting repetitions that enables more accurate recognition of any given activity
- Performed testing to show difference between 2D and 3D Pose Estimation Model.

Teaching Assistant & Project Management, *BGSU - Bowling Green, OH*

Aug 2021 - Dec 2022

- Managing Students, Proctoring Exams, Holding Office Hours.
- Worked on an Arduino based robot, a sustainability project for waste management.

Data Analyst Intern, *Indian Institute of Technology - New Delhi, India*

Aug 2019 - Apr 2020

- Performing Data Annotation on large text data pertaining to classifications of excise duty notifications based on industry.
- Created and automated the process of extracting appropriate data based on new government policy/changes using scripts.
- Performed pre-processing on text data using Regex in extracting the changing import duty data and creating domains in compliance with policy changes.

PROJECTS

Bike Purchase Data

Data cleaning, creating new columns using excel formulas, pivot tables, visualizing pivot table content, xlookup, conditional formatting, creating and connecting filters, complete interactive dashboard.

Key Words: Excel, Filters, Pivot tables, Dashboard

Automation with Power Query

Importing and setting up data drives, loading and combining data, creating transformation pipeline.

Key Words: Power Query, Transformations

SQL queries with MySQL

Exploring data & table relations, Creating Schemas, CLI to import data, data cleansing, combining datasets using table joins, Common Table Expressions, Window functions, working with datasets from various industries such as Sports, E-commerce, Finance, Health, Education.

Key Words: MySQL, Schema, CTE

Stock Market Real-Time Data Analysis Using Kafka and AWS

Produce stock market data using python scripts, manage data flow using kafka cluster deployed on AWS EC2 instance, consume data and store on AWS S3, create AWS Glue catalog by crawler, query data in real time using AWS Athena.

Key Words: AWS, ETL, Apache, Python Programming

Airflow Data Pipeline for Podcast Episodes

Run up an airflow server on AWS EC2, creating DAGs using TaskFlow API to create an SQLite table, download podcast metadata, downloading actual podcast content, loading downloaded content on to SQLite.

Key Words: Airflow, TaskFlow API, SQLite, DAG

Traffic Accident Severity Prediction using Ensemble Methods

Exploratory Data Analysis, Data Wrangling, Extract key metrics, Matplotlib, Seaborn, Plotly, Data Cleaning, Feature Extraction, Data Analytics, Random Forest, XGBoost, Extra Trees.

Key Words: Python Programming, Ensemble Methods, Visualization, KPI

Chest X-Ray Images for Covid-19 Detection

Created a Convolution Neural Network end-to-end project using OpenCV for image recognition, Tensorflow & Keras functions such as ImageDataGenerator Function, Rescaling, Color & Class channels generalization, Max Pooling, Dropout, Flatten layers.

Key Words: Convolution Neural Networks, Image Data

Vehicle Speed Estimation

Using YOLOv4 as object detector, DeepSORT for tracking, overlay speed of vehicle exiting a traffic junction, compare results for YOLOv4 and YOLOv4-Tiny.

Key Words: YOLOv4, DeepSORT

RESEARCH & PUBLICATIONS

Comparison of object detectors on a new vulnerable pedestrian dataset

[Paper: Arxiv](#)

Vulnerable pedestrian dataset, Collected and annotated 2k images, trained on YOLOX, YOLOv4, YOLOv5, Faster R-CNN, EfficientDet, Confusion matrix, Presented findings and reported final mAP scores.

Popularity and Sentiment Analysis of Data Science Libraries

Popularity Analysis, Sentiment Analysis, Mining Github repository metadata, Time-series analysis.

EDUCATION

2023 - Present	Ph.D (Data Science) at Bowling Green State University	
2021 - 2022	M.Sc (Computer Science) at Bowling Green State University	(GPA: 3.75/4.0)
2015 - 2019	B.Eng (Computer Science) at Manav Rachna University	(GPA: 3.2/4.0)

SKILLS

Programming Technologies	Python, C++, SAS. Microsoft Excel, Powerpointm Access, Apache Hadoop, SparkML, Airflow, Kafka, Docker.
Database	MySQL, PostgreSQL, Microsoft SQL Server Management Studio.
Data Visualization	Tableau, PowerBI, IBM Cognos.
Machine Learning	Linear Regression, Random Forests, SVM, Boosting Models, Neural Networks.
Soft Skills	Effective Communication, Teamwork, Problem Solving, Collaborate, Integrity, Research, Attention to detail, Written & Verbal Communication, Multi-task.
Key Words	SSIS, Security, Databases, Networking, Scalability, Develop Reports, SQL Programming, Data Manipulation