

Mandeep Saini

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Education

Dr BR Ambedkar National Institute of Technology, Jalandhar 2020 – 2024 | Punjab, India
B.Tech in Computer Science and Engineering
CPGA: 8.01/10

Projects

E.Coli Detector

Machine Learning, SVM

- Developed an ML model to detect E. coli by classifying **DNA** sequences based on the nucleotide order.
- Collaborated in a team environment to implement a **Support Vector Machine Classifier**, gaining valuable experience in teamwork and supervised learning methods.
- Achieved an accuracy of **96.3%** in identifying and differentiating harmless and pathogenic E. coli strains.

Skin Lesion Predictor

Deep Learning, CNN

- Developed **Convolutional Neural Network** model to accurately predict skin lesions through multi-class classification of images.
- Used **HAM10000** dataset and employed a **3-layer architecture** with max-pooling for feature extraction.
- Currently engaged in ongoing **research**, guided by a university professor, to further enhance the effectiveness of the model.

Article Categorizer

Machine Learning, NLP

- Implemented a machine learning model employing **Natural Language Processing** (NLP) techniques for multi-class classification of financial articles.
- Used **TF-IDF vectorizer** to perform feature extraction and deployed a **Random Forest** classifier to effectively categorize articles.

Personalized AI Trainer

Artificial Intelligence, Computer Vision

- Trained an advanced AI model using **Computer Vision** to detect and analyze human poses.
- Applied trigonometric principles to calculate joint angles and used **MediaPipe** to enable real-time monitoring and progress tracking of physical activities.

Skills

- PROGRAMMING LANGUAGES C, C++, Python, HTML, CSS, JavaScript
- LIBRARIES/FRAMEWORKS NumPy, OpenCV, Scikit-learn, Pandas, Matplotlib, TensorFlow, Express.js
- DEVELOPER TOOLS VS Code, Google Colab, Jupyter Notebook, Oracle Apex, Workbench
- DATABASES MySQL, MongoDB

Course Work

Object-Oriented Programming	Operating Systems
Database Management System	Data Structures and Algorithms

Certificates and Extra-Curricular

AIESEC in Jalandhar ☑

Worked in the iGTa Department as a team leader to facilitate internships for students, and successfully organized various virtual events.

Data Science Introduction-Johns Hopkins University ☑

Acquired foundational knowledge in problem solving and Data Science concepts.