Ashutosh Sharma

Second Year Undergraduate
Computer Science and Engineering
Indian Institute of Technology, Mandi

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Education

Indian Institute of Technology, Mandi	Himachal Pradesh, India
B.Tech, Computer Science and Engineering, CGPA: 8.49/10.00	*2024*
Montessorie Cambridge School, Raja Ka Bagh	Himachal Pradesh, India
CBSE Board, Class - XII: 83.4%	*2019*
Montessorie Cambridge School, Raja Ka Bagh	Himachal Pradesh, India
CBSE Board, Class - X: 10/10 CGPA	*2017*

Skills

- **Programming Languages**:C++, Python, PHP, Kotlin.
- **Libraries**:Tensorflow, OpenCV, PyTorch, Keras, Scikit-learn, NLTK, Numpy, Pandas, Matplotlib.
- **Web Development**:HTML, CSS, JavaScript, Node.js, MySQL, ReactJS, MongoDB.
- **BlockChain**:Web3, Solidity, Smart Contracts, React.

Relevant Courses

- Data Structures and Algorithms, Information & Database Systems, Mathematical Foundation of Computer Science, Data Science-1,2,3 (Probability & machine Learning), Linear Algebra, Artificial Intelligence (Stanford online, CS:221)

Projects

Age and Gender detection on CCTV videos   Github ⌗
Python, Pytorch, OpenCV, MTCNN, ImageAI, Deepface, Keras, Tensorflow
- Domains: SR GAN, DL, Image Processing
- Used ImageAI for object detection, ESRGAN for enhancing resolution and MTCNN for face detection from individual images and used Deepface library for age prediction.

Tower Defense AI   Github ⌗
Python: Pygame, Genetic ML Algorithm
- Developed a game & AI algorithm to play it, under the guidance of mentor.
- Tried 3-4 algorithms and finally implemented Genetic Algorithm from scratch whose performance matches human level performance.

Automated Proctoring   Github ⌗
Django, Tensorflow, OpenCV
- Login authentication using custom Face ID.
- Face-verification during exam at regular intervals to save user's bandwidth.
- Implemented functionality to warn user on switching tabs during exam.

Students IIT Mandi ☐   Github ⌗
Institute Students Website Revamp Project
- Leader of Frontend team, used HTML,CSS and Javascript to design frontend of the platform.
- Currently the website is being used by all students of IIT Mandi.

Achievements

- **Ranked 6th out of 100 participants in CodeRush**:
  CodeRush is an intra-college competitive programming contest organised by AlgoUniversity
- **Runner up in Build a bot team competition**:
  Deployed a bot using LIDAR sensors, that detects no. of people in a room and performs room automation.
- **Won NFT by completing dApp on Buildspace**:
  Developed a Web3 app, using Solidity and Smart Contracts on BuildSpace.
- **Runner up in Chat-Bot team competition**:
  Trained and deployed a chat bot on telegram in a college level team competition.

Position of Responsibility

- **KamandPrompt**-Core Team member at Programming Club of IIT Mandi
- **ML101**-Event organiser for on-campus Machine Learning, named ML101
- **FrostHack'22**-Volunteered for the sponsorship team of FrostHack'22
- **IIT Mandi Wiki**-Server Administrator of IIT Mandi Wiki

Extra Curricular Activities

- **Interested in dance**- Volunteer at UDC, Dance Club of IIT Mandi.