

Avni Mittal

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ACADEMIC DETAILS

Degree/Examination	Institute/Board	Year	CPI/%
2nd Year, B.Tech Computer Science and Engineering	IIT Mandi	2020 - Present	8.64
Higher Secondary Education	SRDAV Dayanand Vihar, Delhi (CBSE)	2020	95.6%
Secondary Education	SRDAV Dayanand Vihar, Delhi (CBSE)	2018	97.6%

RELEVANT COURSES

- Data Structures Algorithms, Linear Algebra, Applied Database Practicum, Data Science I(Data Analysis), Data Science II (Probability and Statistics), Data Science III (Machine Learning Basics), Signals and Systems, Mathematical Foundations of CS, Bio-Engineering and its Applications, Information and Database systems, Computer Organization, Formal language and Automata Theory

FIELDS OF INTEREST

- Machine Learning and Deep Learning, Theoretical Mathematics, Visual Computing, Game Design, Robotics

TECHNICAL SKILLS

- **Languages** : Python, C++, Javascript, PHP
- **Frameworks/Other Tools** : MySQL, MongoDB, Git, HTML, CSS, node.js, Tensorflow, Keras, OpenCV, Django, Unity3D
- **IDEs and Programming Tools** : Visual Studio Code, Sublime Text, Spyder, Pycharm

PROJECTS

- **FIT-GAME** (Development Project) GitHub
2021 | *Python* | *Scartch* | *Node.js* | *Pose Detection*
 - Developed a Gamified Fitness Platform where users have to complete certain tasks (like yoga poses) to enjoy playing games by Pose detection.
 - Worked on Yoga Pose detection and developed the model for Pose detection while Playing the Games and Made a web-application for the Project
 - Made the project for ACM-W National Hackathon 2021 and got selected in the top 10 teams
 - Worked on the Project during Anubhav Fellowship and developed a classifier for yoga poses using LSTM and LRCN models, implemented using TensorFlow and Keras
- **Evaluating Human Reinforcement Learning in complex Environment** (Research Project)
2022 | *Reinforcement Learning* | *Unity3D* | *Machine Learning*
 - Worked and completed under Anubhav Fellowship, a programme by IIT Mandi under the mentorship of Dr. Varun Dutt .
 - Developed the human playing version of games by ML agents and analysed Human performance.
 - Data collection for subproject during the fellowship to develop LSTM models will be applied to recordings of humans playing games in order to use reinforcement learning to predict the next move.
- **College Website Revamp Project Lead** (Development Project) GitHub
2021 | *HTML* | *CSS* | *Javascript* | *Git*
 - Worked on and developed the frontend of the Students Website of IIT Mandi .
 - Took lead and was responsible for the work by a team.
- **Racing Game AI** (Development Project) GitHub
2022 | *Python* | *Machine learning* | *Reinforcement Learning* | *PyTorch* | *TensorFlow* | *PyGame*
 - Developed a racing Car game using PyGame and applied reinforcement Learning to create AI for the game.
 - Worked on Game development using PyGame and developing reinforcement learning algorithm using Deep Q Learning in Pytorch.
 - Made and completed under Winter Projects floated by the Programing Club of IIT Mandi
- **Gesture Driven Ordering Project** (Development Project) GitHub
2021 | *Python* | *Machine learning* | *Pose Detection* | *TensorFlow* | *OpenCV*
 - Developed a gesture driven food ordering System.
 - Worked on Model Development for the Project, generating gesture images and developing logic for the final working of the application.
 - Made the project for Vision Arcadia Hackathon organized by IIT Mandi Robotics Club and bagged 2nd Position

- **Covid-19 Twitter Bot** (Development Project) GitHub
2021 | *Flask* | *Python* | *Tweepy*(Twitter API)
 - Developed Twitter Bot to search for Covid resources and tabulate medical conditions of covid positive patients.
 - Developed the complete Backend and functioning in Python and connected it using Flask Framework
- **Credit Management Project** (Development Project) GitHub
2021 | *Node.js* | *MongoDB* | *HTML* | *Git*
 - Developed a web-application to manage Credits for students of IIT Mandi
 - Worked on the Backend Logic and multiple functionalities

ACHIEVEMENTS

- 2nd Position among second year students for Fakathon (Fake Face classification) in Utkarsh'21
- Participated in Inter IIT Tech meet'22 for the BOSCH Midprep event for gender and age detection.
- 1st Position in ATLAS (Astrathon conducted by Space Cell of IIT Mandi) in Utkarsh'21
- Special Mention in Build-a-Bot Event conducted by Robotronics Club of IIT Mandi
- Successfully Completed 2 Research fellowships during Anubhav Fellowship, conducted by IIT Mandi

STRENGTHS

- Hardworking, Enthusiastic to Learn, Positive Attitude, Disciplined and Dedicated, Leadership Qualities

RESPONSIBILITIES / EXTRA-CURRICULAR ACTIVITIES

- Part of Publicity, Sponsorship, and Design Team in AstraX'21 (Annual Space Fest of IIT Mandi)
- Event Coordinator of Enigma- 12 hour Computational Astronomy Hackathon, in AstraX'21
- Sponsorship Head for AstraX'22
- Volunteer for Space and Technology Club, and Photography and Movie Making Club , IIT Mandi, 2021
- Graphic Design Internship at AiRTH.in and Nikore Associates , 2021