Aditya Dinesh Rajput

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Education

PDPM Indian Institute of Information Technology Design and Manufacturing Jabalpur
Bachelor of Technology in Electronics and Communication Engineering *2024 – 2028*

Relevant Coursework

- Data Structures
- Embedded Systems
- Machine Learning
- RTOS
- Digital Electronics
- Signal Processing
- React
- Node.js

Experience

Participated in E-Yantra 2025 **IIT Bombay**
Reached the Simulation Stage.

- Developed a Simulation for a Self Balancing Bot in Coppeliasim.

Projects

Self Balancing Bot (Simulation) | *Coppeliasim, Python*

- Developed a simulation for a self balancing bot in Coppeliasim.
- Fine tuned a PID Controller in order to balance the bot.

Device Drivers for STM32F411 Microcontroller | *Embedded C, STM32CubeIDE*

- Created bare-metal device drivers for STM32F411 Microcontroller from scratch.
- Developed drivers for GPIO, SPI, I2C and UART.

Chess Advisor | *Python, Machine Learning, YOLO*

- Developed a machine learning model for playing chess which would suggest the best moves at any point of the game.
- Uses YOLO model to detect all pieces and the board.
- Uses Python Stockfish library to suggest the 3 best moves.

VCG Signal Compression Using Machine Learning | *Machine Learning, Pyton, Tensorflow, Signal Processing*

- Developed a Machine Learning model using Tensorflow which compresses and reconstructs the input VCG Signal.
- Uses a CNN–LSTM Autoencoder Architecture.

Technical Skills

Languages: Python, Java, C, C++, HTML/CSS, JavaScript
Developer Tools: VS Code, STM32CubeIDE, Git, NeoVim, Matlab
Technologies/Frameworks: Linux, GitHub, React

Extracurricular

Electronics and Robotics Society
Core Committee Member *IIITDM Jabalpur*

- Organized many Events and Workshops for the students of the collage, teaching them about various fields in Electronics and Robotics.
- Organized Roborush 4.0 for the First Year students of the collage and mentored teams to make their very first WiFi-Controlled Bot.