Harsh Barsaiyan

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EDUCATION

B. Tech in Electronics & Communication Engineering 2021 – Present
International Institute of Information Technology, Naya Raipur
CGPA 9.0

Central Board of Secondary Education (Class 12) 2021
St. Joseph's School, Singrauli
91.00%

Central Board of Secondary Education (Class 10) 2020
St. Joseph's School, Singrauli
91.20%

SKILLS

Areas of Interest:
Artificial Intelligence, Web Development, Network Security, Cloud Computing, DSA, Football, Table Tennis

Libraries/Frameworks:
Flask, Django, Node.js, React

Databases:
MySQL, MariaDB, Oracle, MongoDB

Programming Languages:
Python, C++, JavaScript, TypeScript, Java, Rust, Matlab

Developer Tools:
Docker, GitHub Actions, Heroku, Vercel, Netlify, Google Cloud, AWS, Azure

PROFESSIONAL EXPERIENCE

NTPC Limited 06/2023 – Present
Full Stack Developer Raipur, India

- Led the development of a full-stack online assessment platform used by the company to survey and evaluate its **20,000+ employees**.
- Improved **efficiency and evaluation time** of assessment by upto **20%**.
- Implemented a robust **anti-cheating framework** having features like **mobile phone detection, noise level prediction, multiple person detection** etc. using open-source machine learning and deep learning models.
- Built using **JavaScript, JQuery, Bootstrap** and **TailwindCSS** for frontend, **Python** and **Flask** framework for backend and **MariaDB** for database and deployed on **Azure**.

PROJECTS

Cinny Tauri

- Built a lightweight desktop application for Cinny, a decentralized communication platform that leverages the Matrix Protocol, using the **Tauri** framework and **Rust** programming language.
- Increased **performance** by **50%**, **memory efficiency** by **70%** and **reduced application size** by **97.3%** from **115MB to 3MB** compared to the Electron framework counterpart.
- **Cross-platform** application that works on Windows, MacOS and Linux from a single codebase,

IoT based Water Leakage Detection Framework

- Engineered an intelligent water pipeline monitoring and leakage detection system that leverages **Machine Learning, Signal Processing, Feature Extraction** and **Frequency Analysis** of sound to identify leakage in pipelines and smart homes, which attained an accuracy of up to **93%**.
- A message is sent to concerned person on detection of water leakage through Telegram.
- Built using **Python, Scikit-Learn, Librosa, SciPy** and **Telepot** and deployed using **Raspberry Pi**.

Gravity Guy

- An arcade Chrome T-Rex like game created in **Python** using the **pygame** library.
- Developed an AI version of the game based on reinforcement learning using the **pyneat** library.

ORGANIZATIONS

The Society Of Coders 01/2022 – Present
Event Manager Naya Raipur, India

- Successfully planned and executed various coding events to improve coding culture in college.
- Managing budgets and developing relationships with potential sponsors.