ABHIJEET KUMAR

Ranchi, Jharkhand

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Education

BIRLA INSTITUTE OF TECHNOLOGY   September 2022 – Present
*Bachelor of Technology in AI/ML , **CGPA: 7.5***   *Ranchi, Jharkhand*

CHINMAYA VIDYALAYA   2019 – 2021
*Senior Secondary Education (PCM) , **87%***   *Bokaro Steel City, Jharkhand*

Experience

Research Intern   May 2025 – August 2025
BIT Mesra   *Ranchi, Jharkhand*

- Designed a Deepfake detection pipeline using facial Action Unit correlations extracted via OpenFace and achieved 90%+ accuracy using SVM,ViT and LSTM models.
- Engineered a sliding window method to compute temporal AU correlations, creating 136-dimensional features per video segment for supervised and unsupervised classification.

Projects

Job Portal | *Node.js, MongoDB, React.js, Docker, AWS EC2*   Link ⓞ

- Job portal enabling users to register, log in, search, filter them by category and location, apply for jobs.
- Designed and implemented **RESTful APIs** using Node.js and Express.js; integrated with MongoDB.
- **Dockerized** the entire application and configured **Nginx** as a reverse proxy.
- Implemented **JWT-based authentication** and cookie-based session management.
- Integrated **Redis** for caching frequently accessed data, improving API response times by up to 40%.
- Deployed to **AWS EC2** using containerized services for scalable production hosting.

Smart Traffic Monitering System | *Tensorflow, YOLOv8, EasyOCR, Gmail Smtplib, Twilio*   Code ⓞ

- Collected 1,000+ image data of motorcycle riders from college campus and annotated the data.
- Trained object detection model using **YOLOv8** with transfer learning achieving 95% accuracy the test set.
- Used python to crop up detected images and apply OCR on them using **EasyOCR**.
- Integrated **Twilio API** and **Gmail smtplib** to notify the penalized riders and maintained database.

Smart Career Advisor | *Python, TensorFlow, Scikit-learn, ReactJS, FastAPI*   Link ⓞ

- Developed a full-stack web app serving ML predictions via **RESTful APIs**.
- Built a Machine Learning pipeline to classify 500+ students into career readiness categories using **Random Forest** and **KMeans** (achieved 85%+ accuracy).
- Engineered a mentor-matching algorithm to assign students to 30+ professors and tech recommendation engine suggesting 10+ trending technologies.

Technical Skills

Languages: C++, Python, Java, HTML/CSS, SQL
Developer Tools: VS Code, Linux, Git, GitHub
Technologies/Frameworks: TensorFlow, FastAPI, NLP, MongoDB, AWS, Docker
Relevant Coursework: AI/ML, Operating System, Data Structures and Algorithms, OOPs, Computer Networks

Achievements

- Specialist on **CodeForces** with 1481 Maximum rating.
- Knight on **Leetcode** with 1908 rating with over 800+ DSA questions.
- Qualified for the second round of Flipkart Grid 7.0.
- Have secured sub 2000 rank among 25000+ participants in multiple CodeForces Rounds .

Leadership / Extracurricular

IET STUDENT CHAPTER, BIT MESRA | *Vice President*   April 2023 - Present

- Conducted the Coding Contests for the Recruitment of Juniors into the club which saw participation of over 300 students.