UDAY AGRAWAL

+91-7205753779 · udayagarwal29@gmail.com · https://udayagrawal29.github.io/Portfolio/
https://www.linkedin.com/in/uday-agrawal29/ · https://github.com/UdayAgrawal29

PROFESSIONAL SUMMARY

Highly motivated and solutions-driven **Computer Science Engineering** undergraduate **specializing in Artificial Intelligence and Machine Learning** at **VIT Chennai**. Passionate about building impactful real-world applications with a strong foundation in **Python, machine learning, deep learning, computer vision, and full-stack web development**. Experienced in developing projects using **YOLOv8** for license plate detection, **CRNN and TrOCR for OCR**, and **ReactJS** for modern, responsive web applications. Actively involved in hackathons such as **Smart India Hackathon (SIH)** and Walmart Sparkathon, securing **37th place among 600+ teams** in the internal round of SIH, and showcasing a strong aptitude for innovation and problem-solving. Currently interning at **CDAC-Kolkata** in the **Machine Learning department**, contributing to AI-driven solutions. Quick learner with a strong research inclination and a proven ability to collaborate effectively in team settings.

SKILLS

- **Programming Languages:** C, C++, Java, Python
- **Frontend:** HTML, CSS, JavaScript, ReactJS
- **Backend:** Express, Node JS, Django
- **Database:** PostgreSQL, MongoDB, Oracle SQL
- **ML Framework:** Scikit-learn, TensorFlow, PyTorch, Transformers, XGBoost

---

PROFESSIONAL EXPERIENCE

Centre for Development of Advanced Computing (CDAC),Kolkata

AI Research Intern   *May 2025 – July 2025*

- **Machine Learning Foundations:** Received structured training in supervised learning, model evaluation techniques, and data preprocessing using real-world datasets.

- **Deep Learning & OCR:** Trained and fine-tuned Microsoft's TrOCR model for handwritten Devanagari text recognition, focusing on transformer-based OCR pipelines.

- **Transformer-Based Training:** Worked with VisionEncoderDecoder architectures using Hugging Face Transformers, implementing end-to-end pipelines in PyTorch and OpenCV.

- **Model Deployment:** Built and published a complete handwritten text recognition system on Hugging Face, using a 90K+ image dataset; the model gained 10+ downloads/views within 3 days.

- **Impact & Research:** Contributed to a government-backed research initiative focused on developing AI-powered OCR systems for low-resource Indian languages, with applications in nationwide archival digitization.

PROJECTS

DevaOCR – Transformer-Based Handwritten Devanagari Text Recognition ([Project Link](#))
- Built an OCR system using TrOCR, fine-tuned for recognizing handwritten Hindi/Devanagari script from scanned documents.
- Trained on a custom dataset of over 90,000 labeled word images, ensuring high accuracy on real-world handwriting samples.
- Leveraged transformer-based vision-language models to decode complex scripts with contextual understanding.
- Published the model on Hugging Face, enabling easy integration into OCR and language processing applications.

VISTA – AI-Powered Museum Ticketing Chatbot([GitHub](#))
- Developed an AI-driven chatbot to streamline museum ticket booking, reducing wait times and improving accessibility.
- Implemented automated responses, ensuring quick and accurate user interactions.
- Added multilingual support to cater to a diverse audience.
- Integrated secure payment processing to enhance user experience and operational efficiency.

KEY ACHIVEMENTS

- Secured **37th place among 600+ teams** in the internal round of Smart India Hackathon (SIH)

- Maintained a **CGPA of 9+ across all 4 semesters** of the B.Tech CSE (AI/ML) program at VIT Chennai.

EXTRACURRICULAR ACTIVITIES

- **Core Member – ProdInno Club (Product Innovation Club), VIT Chennai**
Contributed to ideation and execution of multiple tech innovation events and product design initiatives

- **Core Team – CodeVolt Hackathon (48-hour event)**
Organized a State-level hackathon in collaboration with Raptee and Zoho, coordinating logistics, outreach, and participant support.

EDUCATION

Vellore Institute of Technology, Chennai
2023 - 2027
- B.Tech in Computer Science and Engineering specialization in AI ML
- CGPA : 9.09

Nalanda Academy, Kota
2021 - 2022
- 12TH (CBSE) - 88.4%   [PCM]

HOBBIES & INTERESTS

- Playing Table Tennis
- Reading about business, startups, and tech industry trends
- Organizing and managing events

LANGUAGES

- English: Professional Working Proficiency
- Hindi: Native Proficiency