




SASWATA KUMAR DASH

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EDUCATION

Vellore Institute of Technology, Chennai September 2021 - June 2025
Bachelor of Technology in Computer Science and Engineering (Cyber-Physical Systems) CGPA: 8.49

EXPERIENCE

Tomas Bata University in Zlin | Experience Certificate May 2024 – July 2024
AI Research Intern Zlin, Czech Republic

- Spearheaded meta heuristic optimization research using LLMs under Prof. Roman Senkerik with a 4-member team.
- Improved LLaMA 2 performance on custom datasets, boosting solution accuracy by 18%.
- Benchmarked over 3 hyperparameter-tuning frameworks using randomized meta-heuristic problems, generating detailed performance comparisons to identify top-performing configurations.
- Resolved token drift in OpenAI agents using advanced prompt tuning, reducing error by 12%.

Teralumen Solutions Pvt Ltd | Experience Certificate August 2023 – December 2023
AI Intern – BioTech Chennai, India

- Engineered SVM, RF, and CNN models for cancer detection from Terahertz scans, increasing diagnostic accuracy by up to 10% across medical imaging tasks.
- Attained 92% accuracy (CNN), 88% (RF), and 87% (SVM) across a labeled dataset of over 1,000 biomedical images.
- Streamlined OpenCV preprocessing for biomedical datasets and shared insights across 5+ biotech research panels.

PROJECTS

FED UP – AI Emotional + Productivity Companion | Next.js, LLMs, TypeScript, Firebase, Web Speech API | [Live Demo](#)
• Launched a dual-persona AI assistant with **Bestie Mode** for emotional support and **Pro Mode** for technical mentorship; currently in **open beta** with 45+ active users.
• Architected Firestore-powered cross-device sync and **fine-tuned** Gemini conversational models for adaptive tone and multi-turn context retention—boosting engagement by 30%.
• Integrated voice-to-text, text-to-speech, and planned upcoming features including file uploads and AI-powered call assistance; optimized response handling to improve interaction speed by 45%.

PrepR – AI Coding Interview Platform | Next.js, TypeScript, Gemini API, Vercel | [Live Demo](#) | [Source Code](#)
• Maintain a full-stack coding prep platform with **Gemini API**, **Monaco Editor**, and **Google OAuth**; serving 500+ visitors and 50+ registered users.
• Support 20+ languages, 30+ company mock rounds, and integrated **auto-evaluation** for real-time coding feedback.
• Delivered downloadable performance reports outlining candidate strengths, weaknesses, and targeted improvement areas, **accelerating** interview readiness by up to 35%.

Bilingual OCR-to-Audio Speech Tool | Python, FastAPI, CRNN, OpenCV, gTTS, HTML5 Canvas API | [IEEE Paper](#) | [Source Code](#)
• Developed a bilingual OCR system using CRNN with LSTM–GRU layers, achieving **92–95% accuracy** for Tamil/English handwritten text captured via trackpad, webcam, and file uploads.
• Implemented HTML5 Canvas and OpenCV pipelines for multi-input capture, converting recognized text to speech in under **2 seconds** for low-resource scripts; **Showcased at the IEEE International Conference (ICSES 2024)**.

SKILLS

Languages and Frameworks: Python, Java, SQL, C/C++, FastAPI, React, TypeScript, Apache Spark, Spark SQL
Libraries and Tools: PyTorch, TensorFlow, OpenCV, Jupyter, Git, GitHub, Firebase, VS Code, Databricks, AWS, Docker
Domains of Interest: Computer Vision, NLP, LLMs, Fine-Tuning, GenAI, Prompt Engineering, SDKs, AI/ML Engineer
Soft Skills: Technical Communication, Cross-functional Collaboration, Research Documentation

ACHIEVEMENTS AND CERTIFICATIONS

- Presented CRNN-based OCR system at **IEEE ICSES 2024** to 100+ international attendees [Certificate](#)
- Mastered Python and ML via certified training by IIT Kharagpur faculty [Certificate](#)
- Achieved 4+ certifications in **Deep Learning, LLMs, Generative AI, DataBricks**, etc [Certificates](#)