

Surya Narayanaa N T

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EDUCATION

- PSG College of Technology** Coimbatore, India
BE Computer Science and Engineering (Artificial Intelligence and Machine Learning; CGPA: 8.63) 2023-Present

SKILLS SUMMARY

- Languages:** Python, C, Java, JS
- Frameworks:** PyTorch, OpenCV, Scikit, Flask, FastAPI, ReactJS, ExpressJS
- Tools:** GIT, Docker, Postman, PostgreSQL, MySQL, Hugging Face
- Soft Skills:** Leadership, Public Speaking, Organizational Skills, Decision-Making, Time Management

EXPERIENCE

- AIBILL (Startup Incubated in Inria, France)** Remote
Backend Developer Intern Feb 2025 – May 2025
 - Recommendation System (NDA-Compliant):** Built core logic for a recommendation engine integrated into a React Native MVP app.
 - Backend Architecture:** Contributed to backend design and development in a cross-functional team.
 - Confidentiality:** Signed NDA; specifics cannot be disclosed, but work involved scalable and secure design choices.

PROJECTS

- Luna - Offline Podcast Editor (Generative AI, Full Stack, Desktop App):** Built an end-to-end desktop podcast editing tool leveraging on-device NPU for real-time diarization, transcription, and voice regeneration without cloud dependency. Tech: Python, Whisper, Wav2Lip, ElectronJS (Apr '25)
- BookGPT - Interactive Chatbot for PDF Learning (Full Stack, RAG, NLP):** Developed a chatbot that enables users to query academic PDFs using RAG pipeline and LLMs. Features full-stack deployment with custom upload, indexing, and search. Tech: Python, Flask, JavaScript, PostgreSQL, Ollama (Feb '25)
- TranscribeX - AI Video Transcription & Summarization (AI Tools, SaaS Ready):** Built a transcription pipeline that extracts audio, applies Whisper for STT, and summarizes content. Outputs are exportable subtitles (VTT/SRT). Tech: Python, Flask, Cloudinary, Google Gen AI (Nov '24)
- VitaLink - Blood Thinner Tracker for Hospitals (React Native, FastAPI):** Built a mobile version of an existing hospital-used web app developed by seniors. Focused on backend logic and mobile feature integration to enhance accessibility for doctors and patients. Deployment to hospital servers is pending. Tech: React Native, FastAPI, MongoDB (Ongoing)
- QuantGrad - Auto Grad Library with Visual Debugging (Deep Learning Tools):** Built a neural network visualizer that demonstrates autograd internals for educational and research use. Tech: Python, Graphviz (Oct '24)
- Kumari - Tamil Foundational Language Model (LLM, NLP Research):** Developing a GPT-2 based foundational LLM for Tamil, focused on culturally contextualized generation and language understanding. Tech: Python, PyTorch (Ongoing)

RESEARCH

- Neuro Prune - Edge-Efficient Deep Neural Network Optimization (Model Compression, Reinforcement Learning):** Co-authored a pruning algorithm combining Reinforcement Learning with the Lottery Ticket Hypothesis to compress DNNs for edge deployment. Demonstrated 0.22% accuracy improvement with reduced computational overhead on ResNet-18. Presented at: International Conference on Applied Mathematical Models (Awaiting Publication) (Apr '25)

HONORS AND AWARDS

- District 4th Rank – Tamil Nadu HSC Exams (2023)
- 2nd Place – PSG College Math Ability Test (2023)
- Finalist (Top 50) – Qualcomm Edge AI Developer Program (2025)
- Top 5 – Ideathon, PSG Tech (2024)

VOLUNTEER EXPERIENCE

- Technical Team Member – THE EYE** PSG College of Technology
Organized tech events and developed internal tools Feb 2024–Present
 - CTF Portal (Full Stack Development):** Built the primary platform used by the club for conducting CTF events. Developed using Express, React, and MongoDB with session-based authentication, live WebSocket scoreboard, dynamic challenge unlocking, and an admin dashboard. Currently supports 300+ concurrent users.
 - TranscribeX Deployment:** Developed a video transcription tool using Flask, React, and Generative AI to auto-generate transcripts and summaries for workshop use. Currently being redesigned as a SaaS-ready application for broader deployment.