ADEPU VAATSAVA SRI BHARGAV

AI/ML Engineer | Full-Stack Developer | Google Summer of Code 2025 @ VideoLAN

bhargavadepu@outlook.com | +91 94929 09351 | Warangal, Telangana, India

linkedin.com/in/bhargavvz | github.com/bhargavvz | huggingface.co/bhargavvz

SUMMARY

AI/ML engineer (B.Tech CSE, 2026), now an **Artificial Intelligence Intern at Infosys** and a **Google Summer of Code 2025** contributor to VLC (VideoLAN). Fine-tuned an 8B-parameter vision-language model with LoRA, built vision-transformer ensembles for medical imaging, and shipped full-stack AI apps (PyTorch, FastAPI, React, Flutter).

EXPERIENCE

Infosys Sep 2026 – Present

Artificial Intelligence (AI) Intern

- Developing and evaluating applied AI/ML solutions in Python, covering data preparation, modeling, and evaluation.
- Working in an Agile team with code and design reviews; documenting experiments and presenting results to mentors.

Google Summer of Code 2025 – VideoLAN May 2025 – Sep 2025

GSoC Contributor, AI Media Recommender Module for VLC Media Player *Remote*

- Selected by VideoLAN (VLC, 6B+ downloads) to build an AI media recommender in VLC's C/C++/Qt codebase.
- Implemented a native module combining media feature extraction, metadata analysis, playback-based user-preference profiling, and multiple recommendation algorithms, integrated into VLC's build system.
- Worked with a distributed mentor team via GitLab merge requests, code review, and CI; wrote the user guide.

PROJECTS

MedGPT – Medical Visual Question Answering | *Qwen3-VL, LoRA, PyTorch, FastAPI, React* Hugging Face | Mar 2026

- Fine-tuned **Qwen3-VL-8B** with LoRA (rank 64; 210M of 9B parameters trainable; bf16 on an NVIDIA H200) in two stages on 150K+ medical VQA samples from PMC-VQA, VQA-RAD, SLAKE, and PathVQA.
- Reached **78.5% accuracy** (87.1% yes/no, 73.9% open-ended) and 81.2% token-F1 on 5 imaging modalities.
- Added Grad-CAM heatmaps and served the model via a GPU-backed FastAPI API, React dashboard, and Docker.

SkinGuard AI – Skin-Cancer Detection | *PyTorch, timm, Vision Transformers, ONNX* Hugging Face | Mar 2026

- Built a 589M-parameter ensemble (EVA-02-L, ConvNeXt-V2-L, Swin-V2-B) with learnable attention-weighted fusion to classify 8 lesion types, including melanoma, on ISIC 2019 (25,331 dermoscopic images).
- Engineered an H100-optimized pipeline (BF16, torch.compile, focal loss, Mixup/CutMix, two-phase fine-tuning) with Grad-CAM, 8-view test-time augmentation, ONNX export, and a Gradio demo.

AquaSafe – Waterborne Disease Prediction | *XGBoost, LightGBM, Flask, Flutter* Hugging Face | Jan 2026

- Built a 19-screen Flutter health app predicting 7 waterborne diseases and outbreak risk from a 5.25M-record synthetic dataset calibrated to Indian epidemiological data, published on Hugging Face.
- XGBoost + LightGBM ensemble reached **95.19% accuracy**; served 5 models through a JWT-secured Flask REST API.

Communitifx – Civic Issue-Reporting Platform | *React, Spring Boot, PostgreSQL, Docker* GitHub | Apr 2024

- Geospatial issue tracker with color-coded maps that handled 1,000+ reports; a chatbot cut response time by 40%.

More Projects | *Full-stack, mobile & security* GitHub | 2024 – 2025

- **PharmaCare** (Spring Boot, Redis): inventory app for 5+ pharmacies; 30% less wastage, 50% faster queries.
- **VaultLock** (Flutter, AES-256-GCM): zero-knowledge offline password manager with biometric unlock.
- **Voxera** (Next.js, Supabase, Socket.IO): real-time social platform with JWT/bcrypt auth for 100+ concurrent users.

TECHNICAL SKILLS

AI / ML	Machine Learning, Deep Learning, Computer Vision, LLM/VLM Fine-Tuning (LoRA, PEFT), PyTorch, Hugging Face Transformers, timm, scikit-learn, XGBoost, LightGBM, Grad-CAM, ONNX
Languages	Python, Java, C, C++, SQL, JavaScript, TypeScript, Dart
Web & Mobile	React, Next.js, Vue 3, Node.js, Spring Boot, FastAPI, Flask, REST APIs, Flutter, Socket.IO
Cloud & DevOps	AWS, Oracle Cloud, Docker, CI/CD (GitHub Actions, Jenkins), NVIDIA CUDA, Linux, Git
Databases	PostgreSQL, MySQL, MongoDB, Redis, SQLite, Firebase, Supabase
Testing	Unit Testing (JUnit), API Testing (Postman), Test Case Design, SDLC/STLC, Agile/Scrum

EDUCATION

CMR College of Engineering & Technology 2022 – 2026

B.Tech in Computer Science and Engineering | *CPI: 7.53 / 10* *Hyderabad, India*

ACHIEVEMENTS

- **2nd Runner-Up**, HackByte national-level hackathon (300+ teams), VIT-AP Oct 2024
- **Honorable Mention**, SDG 11: Sustainable Cities and Communities, organized by IIT Hyderabad Oct 2024
- **Finalist**, Specathon 2024, 36-hour national-level hackathon, St. Peter's Engineering College Sep 2024