Harshit Agarwal

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Education

Kalinga Institute of Industrial Technology, Deemed to be University	May 2027
B.Tech. Computer Science and Engineering	*CGPA: 9.30*
Delhi Public School Kalinga / NIOS	June 2022
High School	*86.2%*

Skills

Languages: C/C++, Python, Java, JavaScript, C#, Dart, Kotlin, Go | **Cloud/DevOps**: AWS, Docker, K8s, CI/CD, Terraform
Frameworks: Flutter, React, NextJS, FastAPI, PyTorch, TensorFlow | **Databases**: PostgreSQL, MongoDB, Redis
Tools: Git, Linux, Unity, ROS | **Relevant**: GenAI, Computer Vision, Low Latency Systems, Mobile/Web Dev

Experience

shoppin' — USAR Commerce Technologies | *Founding SDE* — Dec 2024 – Nov 2025

- Built and productionized AI systems for fashion search and try-on at scale (3-4 crore items) using CLIP/VLLM embeddings, object detection, and diffusion-based VTON.
- Engineered distributed image/video pipelines; Dockerized models on SageMaker; developed backend with Redis caching.
- Automated data acquisition with high-throughput scraping/onboarding agents for 200+ partner stores.
- Architected AWS EKS infrastructure with Terraform, GitOps, CI/CD, and disaster recovery workflows.

SMLab, NISER | *Researcher (Multimodal AI & Infra)* — May 2024 – Nov 2024

- Crafted iPhone-Drone Sensor Calibration & ARKit 3D Modeling system with 180Hz data transmission via TCP Sockets.
- Built Web Console for self-driving motorcycle (ROS2) handling 25+ sensors with 0.2ms latency.
- Created SLAM-based toolkits/simulations (Kalman Filters, NeRFs, Gaussian Mapping).

Projects & Publications

gaitSetPy | *Python, C* [GitHub] — Jan 2025 – Present

- Python package for gait analysis (10k+ samples, 5+ datasets like Daphnet, MobiFall); Reduced processing time by 40%.
- Developed feature extraction pipeline increasing classification accuracy by 25%; Achieved 97% accuracy with RF/CNN/LSTM.

NVD Exploitability Toolkit | *Hugging Face, PyTorch* [GitHub] — Dec 2024 – Jan 2025

- Exploitability prediction using DistilBERT/GPT2 fine-tuned on 56k+ vulnerabilities (NVD 2014-2024).
- Achieved 85.6% accuracy, 92.1% precision. **Paper accepted in ICANTCI 2025.**

Parkinson's Gait Analysis | *Student Researcher* — May 2023 – Present

- Studied FOG events/gait imbalances using CNN/LSTM/GNNs under Dr. Jayeeta Chakraborty. Paper submitted to Health and Technology.

Leadership & Volunteering

KIIT Entrepreneurship Cell | *RnD Intern, Event POC* — Dec 2023 – Nov 2024

- Organized hackathons ($150K prize pool); Managed 120+ teams for Hult Prize; Secured speakers from top VCs.

The Period Society | *Odisha Chapter Sub Lead* — Jan 2022 – Present

- Led 35-member team on menstrual health projects; Established Centre for Menstrual Studies, Policy & Education Research.

Microsoft Learn Student Ambassador - KIIT Chapter | *AI-ML Volunteer* — Jan 2025 – Present

- Implemented DDPM with training/inference support; Led **ForgeTube** (AI video gen system using LLMs, Diffusion, TTS).
- Mentored 10+ juniors; built **learndiffusion.vercel.app** (UNET-based game). Repos: DDPM, ForgeTube.

Awards | *Scholarships*

- **KIIT Merit Scholarship:** Top 1000 Rank (99%tile).
- **Immerse Oxford-Cambridge Research Scholarship:** Awarded for essay on Child Development.

Hobbies

Guitar, Artwork/Design, Philosophy, VFX, Cooking, Anime, Dance, Volleyball