Varshil Gandhi

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Finding the problems that define what's next. Today I lead AI at AirMDR, building self-improving agents for security operations. Before that, I scaled multilingual relevance and LLM labelling at Microsoft. Outside work, I spend my time exploring robotics, manufacturing, text-to-3D and astrophotography. IIT Guwahati graduate.

Experience

AirMDR
AI Team · Bengaluru, India

Senior ML Scientist — **Apr 2024 – Present**

Leading AI for an agentic SOC that autonomously investigates and responds to security alerts; leading a team of AI engineers.

- **Agent Harness:** Built a self-improving, model-agnostic agent harness across 150+ security integrations, with an exploration system that learns each customer's security stack and context, onboarding them in hours instead of months.
- **Self-Learning:** Distills recurring investigation trajectories into deterministic workflows and continuously learns from agent failures & analyst feedback, cutting MTTI from 15 to < 5 mins & cost per alert by ~75% while improving investigation quality.
- **Evals & Metrics:** Designed case-quality evals, groundedness guardrails and A/B testing framework to ship agent changes with guarantees. Defined SOC metrics & processes that let a 6-person team run 20+ customer orgs, with room to double.
- **AI Infrastructure:** Built the AI stack from scratch to hold SLAs through alert spikes of 100x+ mean volume, with 10x headroom.
- **Product & Growth:** Led the self-serve product and its PLG launch; shipped the security copilot and chat-driven playbook builder.

Microsoft
Advertising ML Team · Bengaluru, India

Data & Applied Scientist 2 — **Mar 2023 – Mar 2024**

Led global initiatives in short-text (Query-Keyword) relevance, the first-stage matching layer of the Ads stack that ranks billions of text pairs, optimizing advertiser recall and user experience.

- **Short-Text Relevance:** Led cross-team efforts to add richer context to Query-Keyword models, cutting advertiser mismatches by 20% globally so ads stay aligned with what users search for.
- **ML Lifecycle Automation:** Streamlined global benchmarking and automated the train-to-deploy pipeline, halving model shipment time and speeding up response to data drift.
- **LLM Labelling:** Replaced external labellers with in-house LLM labelling, saving $500K/year with higher quality and lower label noise.

Data & Applied Scientist — **Aug 2020 – Mar 2023**

- **Multilingual Relevance:** Trained and deployed transformer-based multilingual, multitask models that expanded reach to 70+ languages, unlocking millions in revenue and cutting compute per query 3x.
- **Knowledge Distillation:** Built a framework to distill large pre-trained cross-encoders into production student models trained on billions of teacher-labelled pairs.
- **Calibration:** Developed score-calibration pipelines across markets and languages, stabilising scores through model updates.

Education

IIT Guwahati — 2016 – 2020

B.Tech, Electronics & Electrical Engineering · Minor in Computer Science · **CGPA 9.23 / 10**

Research & Internships

IIT Guwahati | **Bachelor Thesis: Learned Representations for Speech** | Prof. Rohit Sinha — **2019 – 2020**
Self-supervised speech pre-training for Indic code-switched ASR; a unified multilingual acoustic model at lower compute.

RISE Lab, IIT Madras | **Generalizable Autonomous Navigation** | Prof. B. Ravindran — **2019**
Graph-based structural bias that helps autonomous driving models robustly learn the physics of their environment.

MILA | **Text-Based Parser Games** | Dr. Jie Fu — **2019**
Transformer language models to improve autonomous agents in text-based games.

Intel Labs | **Imitation Learning for Robotics** | Dr. Venkat Natarajan — **2018**
Modified Generative Adversarial Imitation Learning (GAIL) to teach robotic-arm movements from expert trajectories.

Awards

2025 **Winner, Commerce Track**, Peak XV Summit Hack
2024 **Runner-up**, AI Agents Hackathon, Stellaris Venture Partners
2023 **Engineering Excellence Award**, Microsoft Advertising
2022 **Kaggle Gold Medal**, Amex Default Prediction
2022 **Kaggle Silver Medal**, Feedback Prize (Effective Arguments)
2018 **Bronze Medal**, Inter-IIT Tech Meet
2016 **KVPY Fellowship**, All-India Rank 701

Explorations

2026 **CADForge**, an RL environment where agents write manufacture-ready CAD (Medium)
2025 **Exoskeleton** for egocentric robot data

Community

2020 **Lecturer**, AI Lecture Series, IITG.ai
2018 **Technical Project Manager**, Robotics Club, IITG