

Ashutosh Bhagwat

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PROFILE

Senior AI Engineer with **4.7+ years of experience** building and scaling **production-grade AI systems** across **edge devices**, backend infrastructure, and analytics platforms. Progressed from **Intern to Team Lead** at an early-stage startup, contributing directly to growth from a **2-member team to 10+ engineers** while owning **end-to-end AI systems**.

Led deployment of large-scale **Computer Vision platforms** across **13,000+ edge devices**, supporting analytics for **10,000+ ATMs** and **2,000+ retail stores**. Delivered **reliable, cost-efficient systems** across **multi-region deployments** spanning India, Indonesia, South Africa, Zambia, Nigeria, Saudi Arabia, Jordan, Guatemala, Burkina Faso, Sri Lanka, and more.

Education

Government College of Engineering and Research [↗](#)

▷ Bachelor of Engineering in Electronics and Telecommunication, CGPA 8.88 (First Class with Distinction)

Pune, India
Jun 2018 – Jul 2022

- **Coursework:** Signal and System, Artificial Intelligence, MicroControllers, DSA, Image Processing
- **Projects:** Construct-o-Bot, Mastering 3D Blender, Smart Home Automation, 3D Volumetric Estimation
- **Achievements:** Air-3 in e-Yantra IIT Bombay Competition, Campus Ambassador, Led 12+ member team for Competition

Work Experience

Tarsyer Insights LLP [↗](#)

▷ (Intern → AI Solution Engineer → Senior AI Engineer) | Team Lead

Pune, India
Jun 2021 – Present

- Owned **end-to-end AI solution delivery**: problem understanding → solution design → data collection & model development → edge deployment → secure ingestion → databases → dashboards → real-time alerts
- Deployed real-time **Computer Vision analytics** for compliance monitoring, customer behavior analysis, and operational intelligence across enterprise environments
- Designed and maintained **data pipelines and databases (MySQL, MongoDB)** powering real-time enterprise dashboards for trends, KPIs, and system health
- Implemented **real-time monitoring and alerting systems** to prevent data loss and ensure operational reliability across distributed deployments
- Optimized deep learning models for **resource-constrained edge hardware**, achieving **40 FPS on 2GB RAM, 75% model compression, and 120ms → 35ms inference latency**
- Designed and operated **hybrid Cloud + On-Prem infrastructure** for secure, high-throughput communication across globally deployed edge systems
- Built **Tarsyer VPN**, a **Nebula-based P2P orchestration platform**, enabling secure remote access and bandwidth-efficient communication for distributed devices
- Delivered **high-accuracy OCR systems** for high-speed industrial conveyor belts and machine odometers under variable lighting conditions
- Built **CPU-based auto-labeling tools using SAM**, reducing annotation effort by **80%** and accelerating model iteration cycles
- Led a **10+ member engineering team**, owning client onboarding, deployment workflows, and post-deployment operations

Fortune3D [↗](#)

▷ 3D Modeling and Prototyping | Core Member

Pune, India
Jan 2021 – Jul 2021

- Owned end-to-end **3D prototyping** for client projects, delivering **production-ready assets** for early-stage product validation
- Enabled **faster product iteration** by supporting **B2C and C2C use cases** with **custom 3D design solutions**

eYantra IIT Bombay [↗](#)

▷ Robotics Intern | Team Member

Mumbai, India
Aug 2020 – Jul 2020

- **Ranked 3rd nationally** in IIT Bombay's e-Yantra program by delivering a **fully autonomous robotics system**
- Contributed to **open-source robotics education** by developing instructional content using **Blender** for multi-domain applications

Project & Business Impact

- Enabled **data-driven decision-making** by converting large-scale **edge telemetry** into real-time dashboards and operational KPIs
- Reduced infrastructure costs by **~\$3K/year** by designing and deploying a **P2P VPN architecture**, minimizing centralized bandwidth usage
- Achieved **~9× operational efficiency** by building a **one-click diagnostics system**, cutting health checks from **~15 min to ~2 min**
- Built an **AI-driven media optimization system** using camera-based analytics; demonstrated via live enterprise client demos
- Delivered **award-winning AI solutions**: Catapult 4.0 (Winner), Retacon (Winner), Maruti Suzuki Innovation Lab (Top 7)
- Ensured **production reliability** at scale by designing fault-tolerant **monitoring and alerting** across **13K+** live edge deployments

Technologies & Skills

AI & CV: TensorFlow, PyTorch, YOLO, OpenCV, NCNN, SAM, ML flow, AWS (SageMaker), Object Detection & Tracking

Edge & Infra: Raspberry Pi, NVIDIA Jetson, Qualcomm, Docker, Kubernetes, CUDA, CI/CD, Git, GitHub Actions

Data & Backend: FastAPI, Flask, REST APIs, MySQL, MongoDB, Redis, Looker, Power BI, Tableau, Metabase, Zoho, Streamlit

Systems & Security: GCP, Azure, P2P Networking, Nebula VPN, Secure Client-Server Communication, Remote Device Orchestration

Leadership: Technical Ownership, People Management, Systems Thinking, Operational Execution, Ambiguity Handling