



Dreamroot

AI THAT WORKS WHERE YOU WORK

COMPANY PROFILE

Dreamroot

AI that works where you work

Dreamroot Enterprises Pvt. Ltd.

dreamroot.ai

A deep-tech AI company for industry and enterprise

Dreamroot builds custom, production-grade AI systems. Our edge is rare: research depth that reaches the top of the field, paired with the engineering discipline to make it work on your factory floor or inside your business. We don't sell demos. We build AI that runs.

Industrial AI

Computer-vision inspection, predictive maintenance and forecasting for manufacturing plants, with a natural home in heavy industry such as steel and aluminium.

Enterprise AI

Retrieval-augmented knowledge systems, document intelligence and custom AI applications for businesses and institutions.

Dreamroot builds research-grade AI that runs in the real world.



Dr. Ashutosh Sao

Founder

02 • FOUNDER AND EXPERTISE

Research trained in Germany, applied in industries

PhD Computer Science, Leibniz University Hannover · MSc, University of Bonn · BTech,
NIT Raipur

94.7%

reduction in training time
versus state of the art

40%

cut in compute cost with
negligible accuracy loss

15 yrs

of experience across India
and Germany

- 📈 Led and built an EV-charging demand forecasting system on a joint project with Volkswagen.
- 🛡️ Led development of defence software for the Indian Navy's Combat Management System and the Indian Air Force at Bharat Electronics Ltd.
- 🌐 Built graph-neural-network based fraud detection across trade data from 32 countries.

Perception and prediction



Computer vision systems

Vision models that read the line in real time.

Catches defects earlier than manual inspection, and keeps a record of every part.

Defect detection
Quality inspection
Safety and PPE monitoring



Predictive maintenance

Models that forecast equipment failure from sensor history.

Turns unplanned downtime into scheduled work, and extends asset life.

Failure prediction
Anomaly detection
Maintenance scheduling



Forecasting and time-series

Demand, load and energy prediction on your own operating data.

Sharper planning and lower energy cost, with uncertainty stated honestly.

Demand forecasting
Load and energy planning
Process optimisation

Knowledge and infrastructure



RAG and knowledge systems

Talk to your data: assistants grounded in your own documents.

Answers come with their sources, so staff can verify rather than trust blindly.

Document intelligence
Search and extraction
Source traceability



AI infrastructure and MLOps

Deployment and operations for models that have to stay up.

Runs on-premise or at the edge, on existing and even older equipment.

On-premise and edge
Data-centre advisory
Production reliability



Custom models and optimisation

Bespoke models tuned for your problem and your hardware.

40% less compute at 1% performance loss is a published result, not an estimate.

Model development
Efficiency optimisation
Evaluation and tuning

 Every system can be deployed so that your data never leaves your premises.

Three reasons, and how an engagement runs

Research you can trust

Founded on PhD-level research published at the field's leading venues. We understand the methods deeply, so we choose the right one for the problem.

Built for production

Optimised, on-premise-capable and engineered to run on real equipment. Your data can stay on your premises.

Proven in the real world

Fifteen years of shipping systems, from defence software in India to forecasting work with European industry partners.

HOW WE WORK

01

Understand

We sit with your process and data before proposing anything.

02

Prove

A scoped pilot on your own data, with agreed success criteria.

03

Build

The production system, engineered for your environment.

04

Deploy

Handover, monitoring and support once it is running.

Selected publications

ECAI 2024	European Conference on Artificial Intelligence — efficient model training and compute reduction
PAKDD 2023	Pacific-Asia Conference on Knowledge Discovery and Data Mining
KDD 2022	ACM SIGKDD Conference on Knowledge Discovery and Data Mining
IEEE ITSC 2021	International Conference on Intelligent Transportation Systems

Bring us the problem you have been told is too hard to automate.

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AI THAT WORKS WHERE YOU WORK

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