



GOVERNMENT
OF ODISHA



GOVT. POLYTECHNIC
BHUBANESWAR



MYOOUNPH NETWORKS
PVT. LTD.

BROCHURE • EDITION 01
COHORT 2026 • A4

— APPLIED AI CENTRE OF EXCELLENCE (COE)

AN INITIATIVE OF GOVERNMENT POLYTECHNIC, BHUBANESWAR & MYOOUNPH NETWORKS PVT. LTD.

Build real. Deploy **smart.** *Engineer the future.*

TIME • **Learn AI in just 2 hours a day, alongside your diploma.**

*An applied AI workforce engineering programme for diploma engineers –
short, daily, guided learning sessions that build, deploy, and operate
intelligent systems across every engineering discipline.*

★ MACHINE LEARNING • DEEP LEARNING • NLP & LLMS • AGENTS • CLOUD & EDGE AI ★

PROGRAMME

Applied AI
Centre of
Excellence
(CoE)

HOST

Govt.
Polytechnic,
Bhubaneswar

INDUSTRY
PARTNER

Ooumph

COHORT START

01 June 2026

ALIGNED WITH

04

NATIONAL & STATE
FRAMEWORKS

— 02 / THE OPPORTUNITY

A defining technology meets a structural skill gap.

SECTION
I
CONTEXT

AI is now embedded in machines, infrastructure, and engineering systems everywhere — yet most diploma engineers graduate without a single deployable AI skill.

57%

of organisations globally use AI in production systems by 2026.

INDUSTRY INDICATOR • 2026

₹8L_{Cr}

India's projected AI market size by 2030, driven by IndiaAI.

NATIONAL AI MISSION

120%

growth in India's AI talent demand over three years.

NASSCOM • 2024

— THE GAP → THE MANDATE

● CURRENT STATE

Diploma engineers graduate with zero applied AI capability.

Theoretical exposure, no deployable systems, no portfolio, no exposure to real industry data.

● COE MANDATE

A practical, industry-integrated
Applied AI Ecosystem.

Build real systems. Deploy them. Document them.
Own them — across every engineering branch.

WHO SHOULD JOIN

01 Diploma students — all engineering branches

02 AI-curious engineers seeking applied skills

03 Job-ready aspirants — portfolio + placement focus

04 Faculty — via the Train-the-Trainer programme

The engineer who can apply AI to their own domain is the engineer industry hires.

A practical, industry-driven applied AI ecosystem.

SECTION
I
CONTEXT

ESTABLISHED UNDER MEMORANDUM OF UNDERSTANDING

Government Polytechnic, Bhubaneswar & MyOomph Networks Pvt. Ltd.

THE COE IS

An applied AI execution hub for diploma engineers.

- ✓ A practical, industry-driven applied AI ecosystem.
- ✓ An applied AI workforce engineering & industry integration hub.
- ✓ A replicable model for polytechnic AI transformation.
- ✓ Outcome-based, project-driven, GitHub-evaluated.
- ✓ Bifurcated for software (Cloud) and hardware (Edge AI) deployment.

THE COE IS NOT

Not a research lab, bootcamp, or certification mill.

- ✗ Not a theoretical math or research center.
- ✗ Not a generic IT coding bootcamp.
- ✗ Not a certification mill.
- ✗ Not lecture-and-exam pedagogy.
- ✗ Not a one-track CS-only programme.

This is an execution-first AI engineering environment.

COE GOVERNANCE

Governed. Industry-led. Accountable.

The CoE operates under a joint industry-academic governance framework with defined leadership, execution authority, and continuous industry evaluation. Every outcome is verifiable, accountable, and aligned with real-world deployment standards.

HOST INSTITUTION

Government Polytechnic, Bhubaneswar
AICTE-approved · Government of Odisha

INDUSTRY PARTNER

MyOomph Networks Pvt. Ltd.
Applied AI · Intelligent systems · AI governance

What makes this CoE different.

SECTION I
CONTEXT

Most AI programmes hand out lecture notes and theory exams. The Applied AI CoE is engineered around a different premise — that diploma engineers learn AI by **building, deploying, and defending real systems**, in their own discipline, on their own machines.

● TYPICAL AI COURSES Lecture-driven, IT-only, certificate-out. × Lecture-and-exam pedagogy with optional projects × Computer Science / IT students only × Sandboxed, textbook datasets × One-track curriculum, no deployment focus × Faculty-only evaluation, written exams × Certificate at end · no career anchor

The only Polytechnic-level applied AI pathway in India that maps directly to industry-grade roles.

A new generation of AI-enabled diploma engineers.

SECTION
I
CONTEXT

— VISION



Engineers who design, build, and deploy intelligent systems.

Develop diploma engineers who can solve real-world engineering challenges with AI — not just describe them. Integrate AI into every core discipline as a working capability, not an elective.

— MISSION



Structured pathways from literacy to deployment.

Deliver a tiered applied AI curriculum that produces job-ready practitioners aligned with the AICTE Year of AI, the IndiaAI Mission, and the Odisha AI Policy 2025 — backed by industry mentorship and a real project portfolio.

— NATIONAL & STATE ECOSYSTEM ALIGNMENT

MISSION IndiaAI Mission	MANDATE AICTE Year of AI	STATE POLICY Odisha AI Policy 2025	COMPLIANCE DPDP Act 2023
LANGUAGE AI Bhashini · MeitY	OPEN MODELS AI4Bharat	SKILL FRAME NSQF 3.5 → 5+	ETHICS NITI Responsible AI

AI for machines, infrastructure, and hardware — applied across every engineering discipline, not confined to IT.

A three-tier, multi-entry, multi-exit pathway.

SECTION
II
SYSTEM

Stackable credentials. Each tier graduates a recognisably different engineer — from AI-fluent to applied practitioner to systems developer.

TIER 01 • FOUNDATION AI-Fluent Student NSQF 3.5 90 HRS 10 WKS 2 HRS/DAY • 5 DAYS/WK	TIER 02 • CORE Job-Ready Practitioner NSQF 4-5 300 HRS 30 WKS 2 HRS/DAY • 5 DAYS/WK	TIER 03 • ADVANCED AI Systems Developer NSQF 5+ 360 HRS 36 WKS 2 HRS/DAY • 5 DAYS/WK
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•01 Foundation – AI Literacy & Digital Intelligence

TIER 1 • NSQF 3.5 • ALL BRANCHES, ALL SEMESTERS

AI fundamentals, prompt engineering, data literacy, no-code automation, responsible AI. No coding required.

DURATION 10 Weeks • ~90 Hrs

DAILY 2 hrs/day • 5 days/week

SEATS 40 / batch

OUTCOME AI-Fluent Student

FEE ₹4,499

•02 Core – Applied AI Practitioner

TIER 2 • NSQF 4-5 • CS/IT + MOTIVATED CROSS-BRANCH

Python, SQL, ML, Deep Learning, NLP, RAG, Agents, and bifurcated deployment (Cloud or Edge AI). Industry capstone.

DURATION 30 Weeks • ~300 Hrs

DAILY 2 hrs/day • 5 days/week

SEATS 30 / batch

OUTCOME Job-Ready Practitioner

FEE ₹23,999

•03 Advanced – AI Specialist & Intelligent Systems Developer

TIER 3 • NSQF 5+ • MERIT-BASED ENTRY FROM TIER 2

Advanced ML, custom YOLO, LoRA/QLoRA fine-tuning, multi-agent orchestration (LangGraph, CrewAI), MLOps, drift monitoring.

DURATION 36 Weeks • ~360 Hrs

DAILY 2 hrs/day • 5 days/week

SEATS 20 / batch

OUTCOME AI Systems Developer

FEE ₹39,999

FOUNDATION → CORE → ADVANCED → COE INNOVATION FELLOW

STACKABLE • MULTI-EXIT

The Daily Learning Loop.

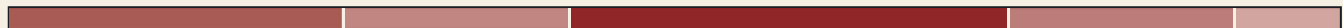
SECTION II
DAILY · 2 HRS

Short, daily, guided learning sessions — five times a week, two hours a day. Every session follows the same loop: **Concept** → **Demo** → **Hands-on** → **Build** → **Review**. Students build, validate, and commit working artefacts every week from Week 1.

No passive learning. Every session produces output.

 STEP 01 · 30 MIN Concept 25% Core idea explained with a real-world engineering analogy. No heavy math.	 STEP 02 · 20 MIN Demo 17% Instructor builds the solution live. Students observe end-to-end.	 STEP 03 · 40 MIN Hands-on 33% Students build alongside the instructor. Faculty co-debug using the "I Don't Know" framework.	 STEP 04 · 20 MIN Build 17% Independent assignment. Working code pushed to GitHub. Prompts logged.	 STEP 05 · 10 MIN Review 8% Quick review with peers; deliverables logged. Validation against 3-Source Rule.
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TIME ALLOCATION · 2-HOUR DAILY SESSION · 5 DAYS/WEEK



P-01 **Real Indian datasets.** data.gov.in, Kaggle, AI4Bharat, ISRO — never sandboxed examples.

P-02 **GitHub from Week 1.** Every deliverable is committed, reviewed, and portfolio-ready.

P-03 **Project-based evaluation.** Zero written exams. Working code, deployed prototypes, oral defence.

P-04 **Open-tool assessments.** Mirror real working conditions. AI use is allowed and disclosed.

P-05 **Live defence rule.** If you cannot explain what you built, the submission is rejected.

P-06 **Monthly industry spotlight.** A practising AI professional delivers a 90-minute working session.

08 / TIME COMMITMENT

What your week looks like.

SECTION II
2 HRS / DAY

The CoE is a part-time programme designed to run alongside your regular diploma syllabus. Two focused hours a day, five days a week, plus a few hours of self-practice on your own time.

Twelve to fourteen hours total — about the time of a single weekend project.

WEEKLY BREAKDOWN

COMPONENT	TIME / WEEK
Guided Classes 2 hrs/day · 5 days/week	10 hrs
Self-Practice Homework, GitHub commits, reading	3 – 4 hrs
TOTAL / WEEK	12 – 14 hrs

A TYPICAL DAY

2-HOUR DAILY SESSION

0:00 – 0:30	Concept. Plain-English explanation.
0:30 – 0:50	Demo. Watch the build, end-to-end.
0:50 – 1:30	Hands-on. You build it. Faculty co-debug.
1:30 – 1:50	Build. Independent assignment + commit.
1:50 – 2:00	Review. Peer + faculty quick check.

PROJECT-BASED

Every week ends with a working artefact. **Zero written exams.**

GITHUB PORTFOLIO

From Week 1, every deliverable is committed and reviewed. **Your portfolio builds with you.**

INDUSTRY DEPLOYMENT

Tier 2 ends with a real cloud URL or flashed device. **Defendable, deployable.**

Short, daily, guided sessions — designed to fit alongside your diploma.

Eight stages. Every student. Every project.

SECTION
II
SYSTEM

A standard engineering workflow runs across all three tiers. Students do not produce notebooks — they produce deployed systems with documentation, validation, and a responsible-AI review at the gate. **Every stage results in a deployable component.**

01	 Problem Identification	Define the real-world engineering challenge with measurable outcomes.	SCOPE BRIEF
02	 Data Collection	Source, collect, and document data from real Indian operational sources.	DATASET + LOG
03	 Data Processing	Clean, annotate, and prepare. Handle noise, imbalance, missing values.	PIPELINE
04	 Model Development	Build, train, and tune the AI solution using Scikit-learn / Keras / HF.	TRAINED MODEL
05	 Testing & Validation	Evaluate metrics, check for bias, verify against the 3-Source Rule.	EVAL REPORT
06	 Deployment	Package and ship — Cloud (FastAPI / Docker / Cloud Run) or Edge (TinyML / Pi).	LIVE SYSTEM
07	 Workflow Documentation	README, architecture diagram, AI_USAGE.md, prompt log, model card.	REPO + DOCS
08	 Responsible AI Review	Ethics, bias, privacy & environmental impact checked before release.	SIGN-OFF

— TIER 2 — SEVEN FLAGSHIP DELIVERABLES TO GITHUB

D-01 Data Analysis Dashboard SQL + Pandas + Seaborn on a real noisy dataset.	D-02 End-to-End ML Pipeline Scikit-learn with SMOTE & cross-validation.	D-03 Deep Learning Application Plant disease detector or energy forecaster.
D-04 RAG Domain Assistant LangChain + ChromaDB on department docs.	D-05 AI Agent / Multi-Agent LangGraph or CrewAI with tool calling.	D-06 Deployed AI Application Docker, Cloud Run, GitHub Actions CI/CD.

AI through the lens of every engineering branch.

SECTION III
APPLICATION

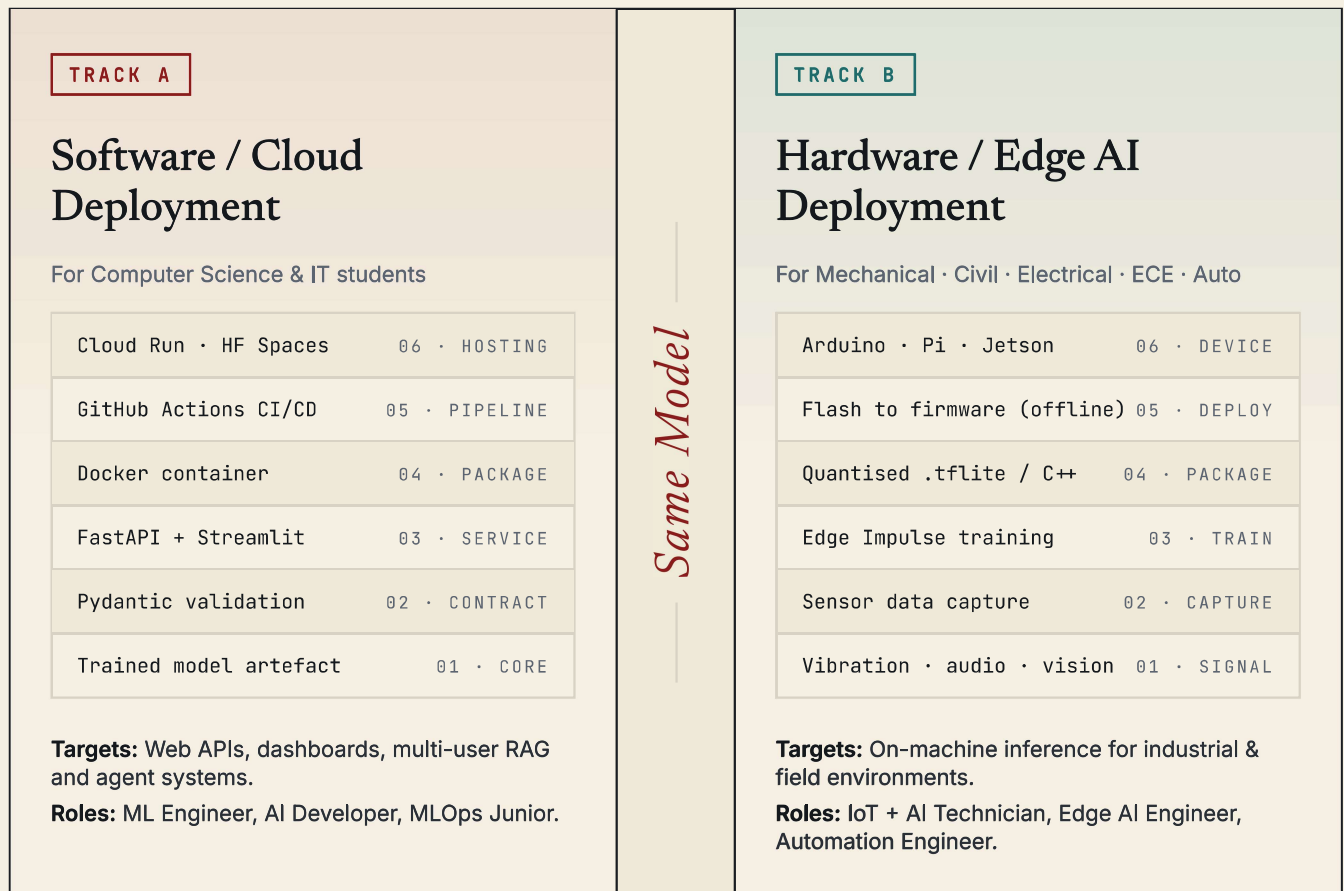
Domain tracks are embedded inside Tier 2 and Tier 3 project work. Students build AI for the systems they already understand — machines, infrastructure, vehicles, grids, buildings.

 Mechanical & Auto TRACK B • EDGE › Predictive maintenance from IIoT sensor data › Vibration analysis & vision-based defect detection › Generative CAD design optimisation › Digital twins for production-line simulation	 Civil & Architecture TRACK B • EDGE + CLOUD › Drone surveying analysis, GIS + AI urban planning › Structural crack & load detection › Construction site CV inspection › BIM + AI for clash detection & cost optimisation
 Electrical Engineering TRACK B • EDGE › Smart grid load forecasting › Fault detection in distribution networks › Solar & wind output prediction › SCADA monitoring & energy audit analytics	 Electronics & Comm. TRACK B • EDGE › Embedded AI / TinyML on Arduino & Raspberry Pi › IoT + AI smart sensors and real-time alerts › PCB defect inspection via computer vision › Voice and gesture AI for HMI
 Automobile TRACK B • EDGE › ADAS — lane, collision, object recognition › OBD-II vehicle health analytics › EV battery state-of-charge prediction › Number-plate recognition & traffic flow	 Computer Science / IT TRACK A • CLOUD › Full-stack AI: end-to-end build & deploy › NLP, RAG systems, agentic AI orchestration › FastAPI, Docker, Cloud Run, GitHub Actions › LangGraph, CrewAI, vector DBs, LLM fine-tuning

One curriculum. Two deployment realities.

SECTION III
APPLICATION

Software students ship to cloud. Core engineers deploy to machines. Both are first-class citizens of the Applied AI Centre of Excellence (CoE).



— 12 / CERTIFICATIONS

Four progressive certifications. Real role outcomes.

SECTION
IV
OUTCOME**L1**

10 Weeks

Applied AI Foundations Certificate

AWARDED AFTER TIER 1 · AI LITERACY LEVEL

Recognises AI literacy: prompt engineering, data basics, domain AI awareness, responsible use under DPDP Act 2023, and Bhashini / AI4Bharat fluency.

ROLES UNLOCKED

AI-Aware Technician across any engineering field.

**L2**

36 Weeks

Applied AI Practitioner Certification

TIER 2 · CAPSTONE · CORE IMPLEMENTATION

Python · ML · DL · NLP · RAG · Agents · Deployment. GitHub portfolio with 7+ deployed projects in the student's domain track.

ROLES UNLOCKED

Junior ML Practitioner · Data Analyst · IoT+AI Technician · AI Automation Tech.

**L3**

36 Weeks

Applied AI Systems Developer

TIER 3 · INDUSTRY CAPSTONE · PRODUCTION LEVEL

Advanced ML, custom YOLO, LoRA / QLoRA, agentic orchestration (LangGraph, CrewAI), MLOps with MLflow, DVC, Evidently AI drift monitoring.

ROLES UNLOCKED

ML Engineer · AI Developer · Data Scientist (entry) · MLOps Engineer (jr.)

**L4**

Fellow

CoE Applied AI Innovation Fellow

JOINT EVALUATION · POLYTECHNIC + OUMPH + INDUSTRY PANEL

Recognition for an end-to-end deployed AI system, full lifecycle ownership, mentorship contribution, and responsible-AI review in practice.

PATHWAY

Senior tech roles · Lateral B.Tech entry · Startup co-founder track.

Industry is built into the curriculum. Not bolted on.

SECTION
IV
OUTCOME

INDUSTRY INTEGRATION

Real problems, real datasets, real evaluators.

Industry is embedded from Day 1 – not added later.

- › **Industry problem statements.** Capstones drawn from partner companies and government departments.
- › **Real operational datasets.** Trained on actual data with confidentiality protocols, never textbook examples.
- › **Internship pathway.** Top L2 and L3 students referred for 4–8 week internships with industry partners.
- › **Industry mentorship.** Each advanced team is paired with a working AI practitioner for the capstone.
- › **Joint evaluation panels.** Final defences include at least one industry evaluator alongside faculty.
- › **Monthly AI Spotlight.** 90-minute working session from a practising AI professional — real projects.

ANNUAL	CAPSTONES	MENTORS
120–200	50+	12
students trained	deployed projects / yr	monthly spotlights

INFRASTRUCTURE & STACK

Phased build. Cloud-first. Edge-ready.

YEAR 01 — FOUNDATION

Lab workstations (8GB+ / SSD / i5)	×30
Arduino Nano 33 BLE Sense	×10
Raspberry Pi 4 (embedded AI)	×05
Fiber internet · webcams · display	100 Mbps

YEAR 02 — ENHANCEMENT

GPU workstation (RTX 4080+)	×01
Jetson Nano / Orin edge units	+kits
IoT sensor kits	+sets
NAS for datasets & archives	×01

CLOUD & SOFTWARE (FREE / EDUCATIONAL)

Google Colab · HF Spaces · AWS Educate · GCP for Education · Azure for Students · GitHub Education · NumPy · Pandas · Scikit-learn · TensorFlow · PyTorch · OpenCV · Hugging Face · LangChain · FastAPI · StreamLit · Docker

From Apprentice to Fellow.

SECTION IV
OUTCOME

Each level is a distinct economic identity – different work, different responsibilities, different earnings. The CoE is the only Polytechnic-level pathway in India that maps directly to industry-grade roles, with Ooump as the on-the-ground employer of record.

L1 AI Apprentice	L2 AI Engineer	L3 AI Specialist	L4 AI Fellow
<i>"I assist with applied AI projects under supervision."</i> - Run pre-built pipelines on real datasets - Annotate, validate, clean training data - Support deployment under mentor review - Co-author one capstone project	<i>"I build and deploy AI systems for clients."</i> - Own end-to-end ML pipelines independently - Fine-tune models on domain-specific data - Ship to production on edge or cloud - Lead small client engagements	<i>"I architect AI solutions across domains."</i> - Design multi-model production systems - Mentor L1/L2 cohorts inside the CoE - Own a vertical — health, agri, manufacturing, gov - Co-author whitepapers and IP filings	<i>"I lead applied research and policy at scale."</i> - Direct CoE research streams & partnerships - Advise government & industry on AI deployment - Build founding teams for spin-out ventures - Author IndiaAI / AICTE technical doctrine
STIPEND / MO ₹8–15k	CTC / YR ₹4.5–8 L	CTC / YR ₹9–15 L	CTC / YR ₹18 L+

AVERAGE 3-YEAR PROGRESSION FROM L1 → L3 • OOUMPH ANCHORS PLACEMENT AND ON-JOB MENTORSHIP AT EVERY STAGE



In five years, every engineering job will require AI *fluency*.

The CoE gives you the tools, mentorship, and portfolio to be ready when it does.

• ADMISSIONS

Open · Merit + interview

• SEATS PER BATCH

40 (L1) · 20 (L2) · 12 (L3)

• INDUSTRY PARTNER

MyOoumph Networks Pvt. Ltd.
Applied AI · Intelligent systems

• ALIGNED WITH

IndiaAI Mission · AICTE Year of AI
Odisha AI Policy 2025 · DPDP Act
2023

PROGRAMME FEES

TIER 01 · FOUNDATION

₹4,499

10 weeks · 90 hrs · NSQF 3.5

TIER 02 · PRACTITIONER

₹23,999

30 weeks · 300 hrs · NSQF 4-5

MOST CHOSEN

TIER 03 · SPECIALIST

₹39,999

36 weeks · 360 hrs · NSQF 5+

ALL TIERS · 2 HRS/DAY · 5 DAYS/WEEK · PART-TIME ALONGSIDE DIPLOMA

APPLY ONLINE



DOWNLOAD BROCHURE (PDF)



LIMITED SEATS · SELECTION BASED ON APPLICATION & INTERVIEW

ADMISSIONS & ENQUIRIES

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SCAN TO APPLY
ONLINE · 60 SECONDS



APPLICATIONS OPEN

APPLY AT OOOMPH.COM/COE/BHUBANESWAR