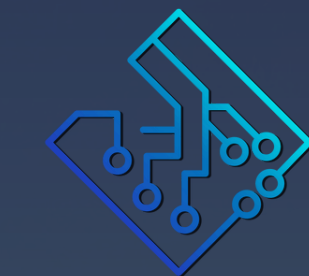




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The Highly Anticipated Second Edition **AI & ML** Immersive Bootcamp

"Empowering future AI & ML professionals through hands-on experience"

www.cybdata.ai



8-11th Dec 2025
United Docks Business Park,
Port Louis,
Mauritius

MQA Approve
HRDC Refundable up to 90%



ABOUT US

Cybdata empowers organizations to excel through customized IT and AI services that transform daily operations, customer experiences, and business processes. Our tailored solutions—not one-size-fits-all—are designed to meet your unique goals, enhance efficiency, and keep you ahead in the competitive landscape. Alongside technology services, Cybdata offers comprehensive education and training programs to equip individuals and teams with essential skills for successful digital transformation.

Our AI/ML Hands-On Bootcamp is now in its second edition, building on the success of the first event and enriched with cutting-edge features including Agentic AI and Generative Model practices. This immersive bootcamp bridges foundational AI knowledge with industry-relevant applications, providing hands-on experience with the latest tools and technologies.

Committed to driving innovation and cultivating talent, Cybdata continuously adapts its offerings to reflect emerging trends and real-world requirements, helping clients and learners alike unlock new levels of performance and competitive advantage. Whether enhancing operational resilience, accelerating AI adoption, or enabling workforce readiness, Cybdata stands as a trusted partner in navigating the evolving technology landscape.

BOOTCAMP OVERVIEW & LEARNING OUTCOMES

Cybdata proudly presents the second edition of its highly successful AI/ML Bootcamp, welcoming individuals from complete beginners to intermediate learners with programming or data science experience. Designed for professionals eager to upskill or transition into AI-driven roles, this intensive 4-day program equips participants with essential knowledge and hands-on skills in artificial intelligence and machine learning. Attendees will explore core ML concepts like supervised and unsupervised learning, regression, classification, and clustering, gaining practical experience building real-world AI models.

Day 1 - Foundations, Python QuickStart, prompting that works for AI/ML

Day 2 - Retrieval-Augmented Generation (RAG) & SimpleApps

Day 3 - Agentic AI patterns & tool usage (LangGraph vs DeepAgents vs Autogen)

Day 4 - From prototype to production + Projects & Presentations

The curriculum also covers cutting-edge topics including Generative AI, Large Language Models (LLMs), and ethical AI practices, empowering participants to create sophisticated, responsible AI applications. It blends theoretical grounding with applied projects, preparing learners to leverage AI technologies effectively across diverse industries. Industry experts will enrich the experience with insights and case studies from Healthcare, Finance, Hospitality, and Cybersecurity sectors, highlighting practical AI deployments and challenges.





DR. ELI RIVERA

LEAD RESEARCH ENGINEER
AI/ML CENTER OF EXCELLENCE, USA

As an expert and industry researcher, Dr. Rivera has extensive knowledge in AI and ML, with research interests in computer vision, intelligent security agents, self-healing systems, and offensive cybersecurity for critical infrastructure. He has worked on projects involving satellite imagery, trajectory analysis, human recognition, drone detection, geo-localization, and high-availability infrastructure deployment. Dr. Rivera holds accreditations in Deep Learning, AI & ML Engineering for Production (MLOps), TensorFlow Development, and Microsoft Certified AI and Azure Data Scientist Associate certifications.



DR. SANJAY SUBRON

PRINCIPAL SOLUTION ARCHITECT
(USA)
DIRECTOR: CYBDATA.AI

AI/ML FOCUS CYBERSECURITY, NETWORKING &
INFRASTRUCTURE

Sanjay Subron is an AI/ML-driven cybersecurity and networking expert skilled in leveraging advanced technologies to identify threat actors and mitigate risks across various sectors. He has extensive experience designing AI/ML solutions for digital transformation in both on-premise and cloud environments. As a passionate instructor in the USA, Sanjay develops and delivers hands-on AI/ML and cybersecurity training, focusing on real-world applications, emerging AI techniques, threat detection, and automated defense.



MR. RAMESH BUNDHOO

DIRECTOR: KMB CONSULTING,
MAURITIUS

A highly qualified professional with over 30 years of success directing and managing complex programs across Finance, Software Development, and Consulting sectors. Experienced in navigating diverse business landscapes in Mauritius, Africa, and the UK, driving transformation through innovative leadership and cross-functional collaboration. Skilled at aligning technology with business goals, optimizing efficiency, and leading high-performance teams to exceed objectives and maintain a competitive edge.

WHAT IS AI & ML?



Artificial Intelligence (AI) is the branch of computer science that enables machines to mimic human intelligence through learning, reasoning, and decision-making.

Within AI, Machine Learning (ML) focuses on creating algorithms that allow systems to automatically analyze data, discover patterns, and improve their performance over time without needing explicit programming for each task.

This dynamic blend of technologies is driving groundbreaking innovations across diverse fields such as healthcare, where AI enhances diagnostic accuracy and optimizes patient care; finance, where machine learning improves fraud detection and automates complex trading strategies; and autonomous systems, powering self-driving vehicles and intelligent robotics.

In this bootcamp, participants will gain practical, hands-on experience with AI and ML concepts and tools-ranging from foundational principles and data preprocessing to advanced model development and deployment-equipping them to solve real-world problems and build intelligent, adaptive applications that shape the future.

WHY AI AND ML?

AGENTIC AI

Uses data to optimize personalized customer experiences

REDUCE OPERATIONAL COST

Automating manual or statistics-driven tasks that save time on repetitive tasks and increases focus on high-value jobs

LAUNCH INNOVATIVE PRODUCTS

One-way enterprises are using AI is to launch new product lines to capture market share or establish new lines of revenue.

MEET CUSTOMER EXPECTATIONS

Designing intelligent systems that accurately anticipate user needs and deliver personalised, reliable, and efficient solutions.

INTRODUCE NEW LINES OF REVENUE

Exploring innovative products, services, or markets that diversify income streams and strengthen long-term business growth.

INCREASE ORGANIZATIONAL PERFORMANCE

Produce reliable, relevant, dynamic and intelligent information that can help with decision making.

DAY 1 - FOUNDATIONS, PYTHON QUICKSTART, PROMPTING THAT WORKS FOR AI/ML

Learning goal: Understand what GenAI/LLMs are, core ML concepts, and get every participant hands-on with Python & prompts.

9:00 - 10:30 AM	Brief history & LLM tech (instructor-led + demos) • From expert systems → deep learning → Transformers • GPT/BERT families, what “tokens/context/windows” mean • Where LLMs shine vs. fail (hallucinations, recency, grounding) • Quick demo: same prompt across models; show differences	13:00-14:30	Python essentials for AI Hands-on Labs • Setup google colab, Learn Variables, lists/dicts, loops, functions, virtualenvironments, notebooks/VS Code • Quick data I/O (CSV/JSON), simple text cleaning • Parse a CSV andcompute simple stats with Python
10:30-10:45AM	Break	14:30-14:45	Break
10:45-12:00PM	AI/ML and Data Science essentials (engineer's crash course) • Supervised/unsupervised/RL—when you'd use them • Train/validate/test, metrics intuition, bias/variance • Deep learning at 10,000 ft: embeddings & representation • Mini-lab: Identify problem types from real tasks (bank fraud flagging, hotel review tagging, policy text QA).	14:45-16:00	Integrating AI into daily workflow Activities • Where to start: coding assistants, docs Q&A, ticket triage, report drafting • Industry mini-exercises (pick one per table): • Banking: turn a product sheet into FAQs & a customer email reply • Govt: policy clause extraction + plain-language rewrite • Hospitality: summarize reviews → generate ops checklists
12:00-13:00	Lunch	16:00-17:00	Prompt engineering Hands-on Activities • Good prompts vs. bad; structure: role → task → constraints → examples → format • Patterns: step-by-step reasoning, few-shot, transform → critique → refine • Provided with a disorganized internal email or policy excerpt. Create a concise summary highlighting key points, identify action items, and assess potential risks. Then, review with critical feedback and refine accordingly.

DAY 2 - RETRIEVAL-AUGMENTED GENERATION (RAG) & SIMPLE APPS

Learning goal: Build a grounded Q&A app over your own documents; understand embeddings, indexing, and basic evaluation.

9:00 - 10:30 AM	LLMs + Retrieval (instructor-led + whiteboard) • Why RAG: reduce hallucinations, add enterprise knowledge • Embeddings, vectorDBs, chunking, metadata, top-k • Guardrails: source citation, format control ◦ Demo: Ask questions over a small PDF set.	13:00-14:30	Prompting for retrieval & evaluation • Query rewriting, system vs. user prompts, grounding instructions • Quick evals: exact answers, contains-facts, citation correctness • Packaging a simple app • Turn the RAG into a CLI or Streamlit mini-app • Add file upload, configurable top-k, "show sources" toggle • Hands-on Lab: Domain adaptation: swap corpus (bank/govt/hotel) and re-test
10:30-10:45AM	Break	14:30-14:45	Break
10:45-12:00PM	RAG Lab (code-along) • Create index over 10–20 pages: Bank Policy, City Charter, Hotel Standard of Operation • Build query → retrieve → synthesize → cite sources • Add formatting (JSON/Markdown sections) • Checkpoint: "Hello, RAG" app runs locally.	14:45-16:00	"AI at work" playbook • Class activity: Backlog ideation. Each participant should propose three potential workflows to consider for the capstone project.
12:00-13:00	Lunch	16:00-17:00	• Guest Speaker

DAY 3 – AGENTIC AI PATTERNS & TOOL USAGE (LANGGRAPH VS DEEPAGENTS VS AUTOGEN)

Learning goal: Build an agent that can use tools(e.g., calculator, web/API/DB), compare frameworks, add basic guardrails.

9:00 - 10:30 AM	Agentic AI foundations (instructor-led + examples) • What is an agent vs. plain LLM app; ReAct/Reflection patterns • Tool use: planning → acting → observing → refining • Failure modes: loops, tool misuse, prompt injection	13:00-14:30	Frameworks choice • LangGraph mental model (state/edges/checkpoints), • DeepAgents (sub-agents, virtual filesystem handoffs), • Autogen (multi-agent chats) ◦ Hands-on: run a minimal agent in one framework; compare 3 pros/cons. Guardrails & security(hands-on) • Prompt injection/Jailbreak examples → mitigate with instruction hierarchy, sanitizers, allowlists • Output validation (pydantic/JSON schema); ◦ Optional: intro to MCP & Bedrock action groups for controlled tool surfaces.
10:30-10:45AM	Break	14:30-14:45	Break
10:45-12:00PM	Tool-using agent lab(code-along) • Start with a planner + two tools(calculator, yfinance module) • Add a structured output schema (JSON) for reliable answers	14:45-16:00	Industry mini-builds (guided) • Review analytics agent + action list ◦ Deliverable: choose capstone idea and sketch inputs/outputs/tools for various industries; including Hospitality, Finance & Government.
12:00-13:00	Lunch	16:00-17:00	• Guest Speaker

DAY 4 - FROM PROTOTYPE TO PRODUCTION + PROJECTS & PRESENTATIONS

Learning goal: Production-minded practices(context engineering, observability, evals), then build & present.

9:00 - 10:30 AM	Going to production (instructor-led + examples) - Context engineering: chunking, re-rankers, caching, system prompts - Evals: what & why; golden sets vs. synthetic; pass/fail vs. graded - Safety & compliance: audits, data access boundaries, secrets management	13:00-14:30	Capstone Project - Teams/individuals implement their capstone (RAG or agent) - Instructor checkpoints: schema, tool list, evals ≥ 5 cases, basic guardrail
10:30-10:45AM	Break	14:30-14:45	Break
10:45-12:00PM	Evals lab (code-along) - Write 6–10 test cases for your RAG/agent (correctness + citation) - Run quick eval; fix one failing case; re-run to confirm Deployment options - Vended APIs vs. Bedrock; serverless endpoints; cost controls - Basic CI for prompts/config; feature flags for models/tools	14:45-16:00	Presentations and Open Discussions 3–5 min each: problem → demo → how it works → what's next - Peer feedback rubric: usefulness, robustness, clarity
12:00-13:00	Lunch	16:00-17:00	AI-Powered Creative Planning Brainstorm workplace scenarios and adding potential ideas or workflows to prioritize or act upon. Leveraging AI/ML tools to generate insights, identify patterns, and optimize idea selection, thereby enhancing the creativity and effectiveness of future projects.

JOIN US

WHERE ? : UNITED DOCKS BUSINESS PARK, PORT LOUIS

WHEN ? : From 8 December 2025 to 11 December 2025

- **Day 1 - 8 Dec 2025** - Foundations, Python QuickStart, prompting that works for AI/ML
- **Day 2 - 9 Dec 2025** - Retrieval-Augmented Generation (RAG) & SimpleApps
- **Day 3 - 10 Dec 2025** - Agentic AI patterns & tool usage (LangGraph vs DeepAgents vs Autogen)
- **Day 4 - 11 Dec 2025** - From prototype to production + Projects & Presentations

COST per Participant : 75 000 Rs Includes : **Contact Us :**

- 4 day Bootcamp Attendance
- Cloud Access to practice lab
- Breakfast
- Lunch
- Snack



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