PROPOSAL FOR

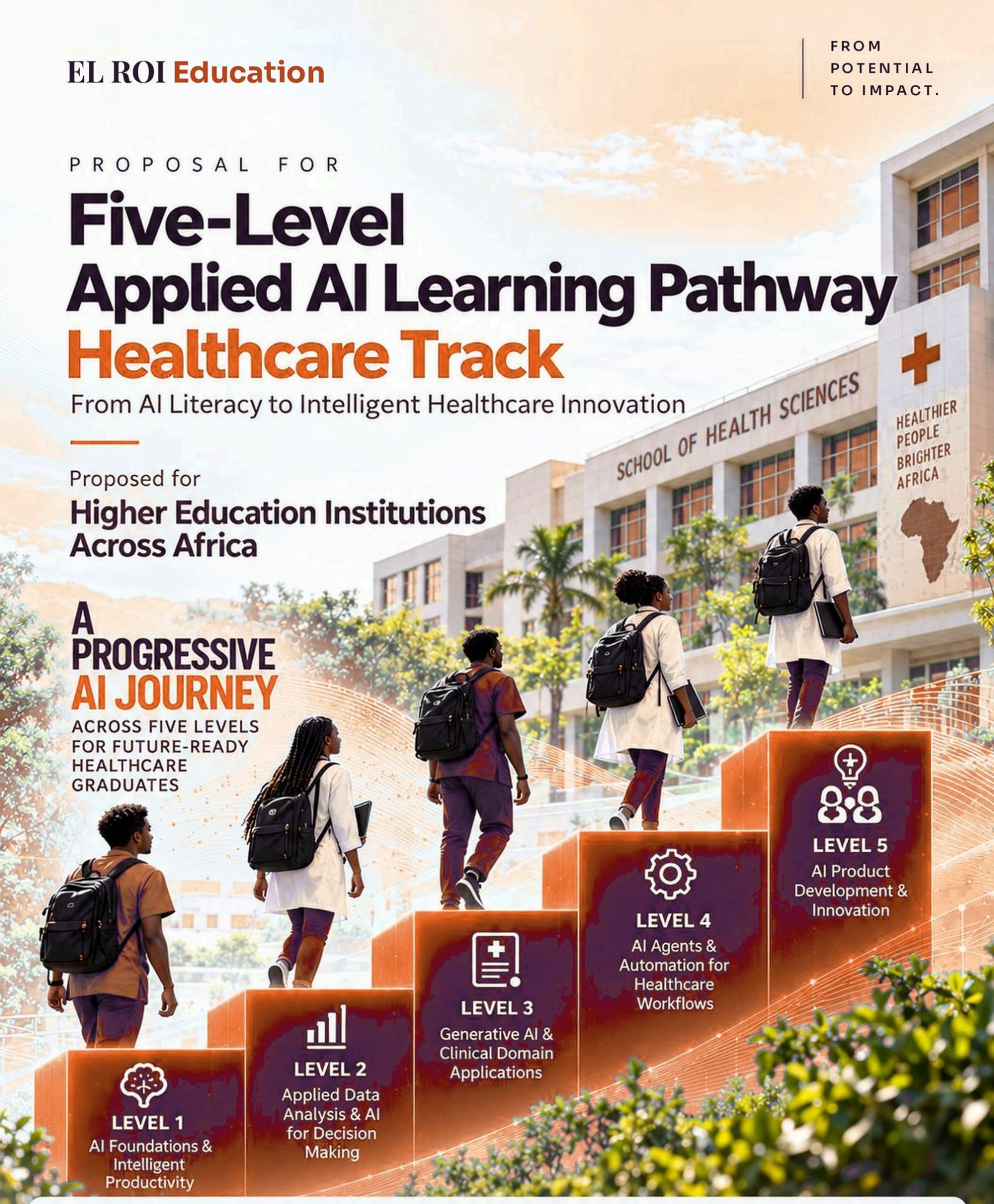
Five-Level Applied AI Learning Pathway

Healthcare Track

From AI Literacy to Intelligent Healthcare Innovation

Proposed for

Higher Education Institutions Across Africa



A PROGRESSIVE AI JOURNEY

ACROSS FIVE LEVELS FOR FUTURE-READY HEALTHCARE GRADUATES

LEVEL 1
AI Foundations & Intelligent Productivity

LEVEL 2
Applied Data Analysis & AI for Decision Making

LEVEL 3
Generative AI & Clinical Domain Applications

LEVEL 4
AI Agents & Automation for Healthcare Workflows

LEVEL 5
AI Product Development & Innovation

75 Hours per Level
30 Hours Theory + 45 Hours Hands-on

Flexible Delivery
On-campus, blended or fully online

Real-World Projects
Hands-on use cases in every level

Industry-Oriented Certification Readiness
Portfolio and career readiness

Productivity AI Tools in Every Level
Stronger impact and faster learning

El Roi Nexus AI Platform
Platform access, content and guided learning

EXECUTIVE SUMMARY &

Program Objectives

Empowering Future-Ready Healthcare Graduates Through a Structured AI Learning Journey



Executive Summary

This five-level applied AI learning pathway equips healthcare students from medicine, nursing, pharmacy, public health, allied health, healthcare management and related health-sciences disciplines with progressive AI skills, from AI literacy and productivity to data analytics, generative AI, intelligent automation, and AI product innovation. Each level is 75 hours (30 hours theory + 45 hours hands-on), blending strong foundations with real-world practice. The pathway is designed for colleges and universities across Africa and supported by El Roi Nexus AI and guided content to ensure a consistent, high-impact learning experience.

Target Audience

- **Medicine** — MBBS and medical programs
- **Nursing** — BSc Nursing and related programs
- **Pharmacy** — BPharm and pharmacy programs
- **Public Health** — MPH and public health programs
- **Allied Health Sciences** — Physiotherapy, Radiography, Lab Tech, Nutrition, etc.
- **Healthcare Management** — Health systems, policy and management
- **Biomedical / Life Sciences** — Biomedical sciences, biotechnology, etc.
- **Related Health Sciences** — Other allied and health-sciences programs

Program Objectives

1. Build AI literacy and digital productivity for healthcare students.
2. Develop healthcare data analysis and decision-support capability.
3. Enable domain-specific AI applications for real-world healthcare use cases.
4. Prepare students for automation, AI agents and innovation in healthcare.
5. Strengthen portfolio, certification awareness and career readiness for the evolving healthcare workforce.

Key Highlights

- **5** Progressive Levels
- **375** Total Learning Hours
- **150** Hours Theory
- **225** Hours Hands-on
- **Productivity** AI Tools Embedded
- **Real-World** Healthcare Use Cases

Student Transformation Journey

LEVEL 1
AI-Aware Student
Understand AI basics and use AI tools confidently

LEVEL 2
AI-Enabled Analyst
Analyze healthcare data and generate insights

LEVEL 3
Healthcare AI Application Builder
Build domain-specific AI solutions for real-world problems

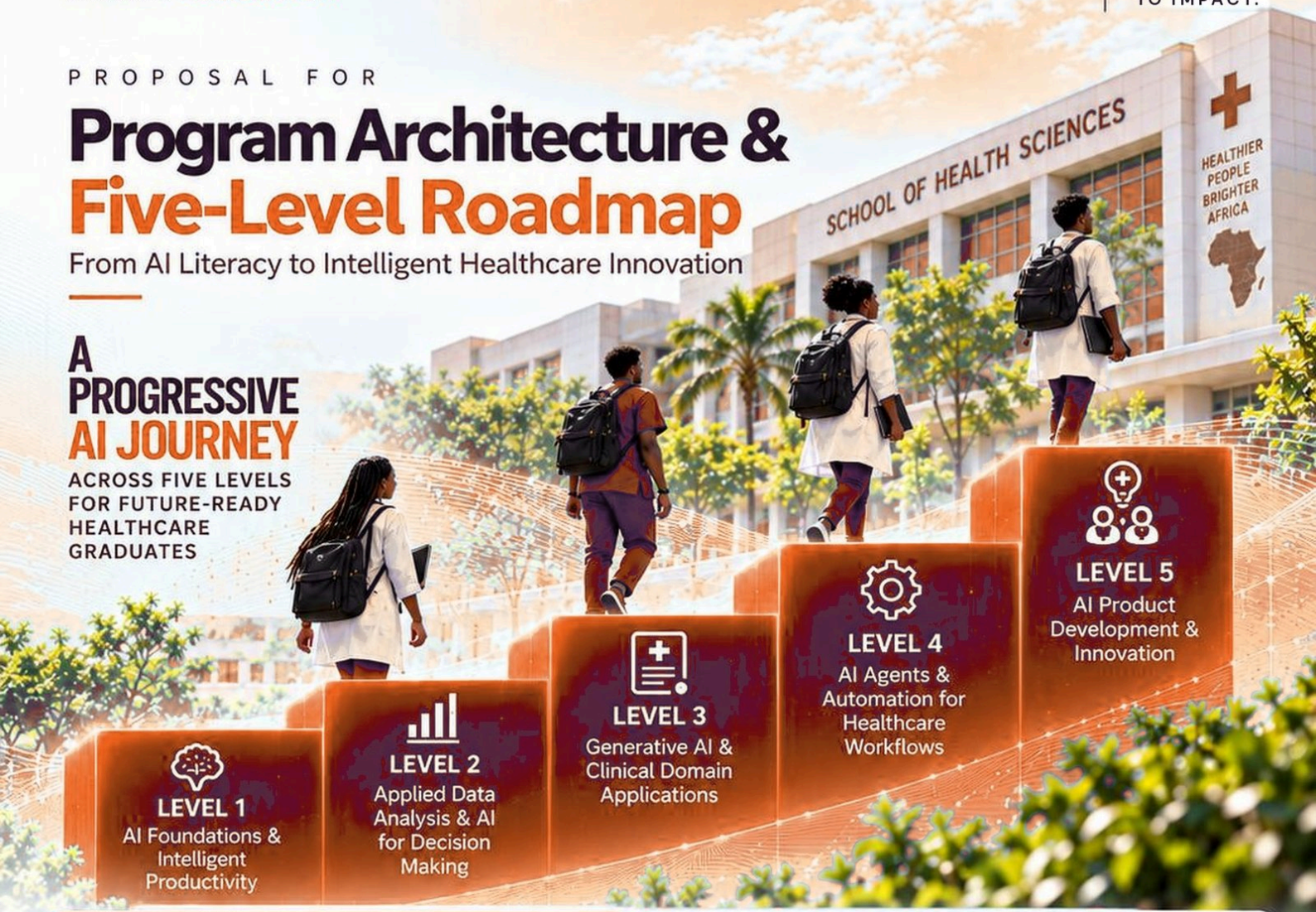
LEVEL 4
Intelligent Workflow Designer
Design automation workflows and AI agents for healthcare

LEVEL 5
Applied AI Innovator
Develop AI products and solutions with real-world impact

PROPOSAL FOR

Program Architecture & Five-Level Roadmap

From AI Literacy to Intelligent Healthcare Innovation



A PROGRESSIVE AI JOURNEY

ACROSS FIVE LEVELS FOR FUTURE-READY HEALTHCARE GRADUATES

ACADEMIC STRUCTURE PER LEVEL

Each level is designed with a balanced mix of theory and hands-on learning to ensure conceptual clarity and practical capability.

- **30 Hours** Theory per Level
- **45 Hours** Hands-on per Level
- **75 Hours** Total per Level

TOTAL PROGRAM ENGAGEMENT

Across Five Progressive Levels

375 Total Learning Hours (75 Hours × 5 Levels)

FLEXIBLE DELIVERY OPTIONS

The pathway can be embedded into academic delivery, offered as modular bootcamp blocks, or delivered in blended faculty-supported format.

PROGRAM SUMMARY — LEVEL-WISE FOCUS

A structured and progressive learning journey from foundational skills to real-world healthcare innovation.

LEVEL 1
AI Foundations & Intelligent Productivity
- AI Fundamentals for healthcare
- Prompt engineering
- Productivity tools
- Healthcare use cases

LEVEL 2
Applied Data Analysis & AI for Decision Making
- Healthcare data analysis
- Data visualization
- Predictive modeling basics
- Data-driven decision making

LEVEL 3
Generative AI & Clinical Domain Applications
- Clinical document analysis
- Medical summarization
- RAG for healthcare
- Domain-specific solutions

LEVEL 4
AI Agents & Automation for Healthcare Workflows
- Intelligent agents
- Workflow automation
- Clinical process design
- Multi-agent systems

LEVEL 5
AI Product Development & Innovation
- Healthcare AI products
- End-to-end development
- Deployment & MLOps
- Innovation & entrepreneurship

KEY HIGHLIGHTS

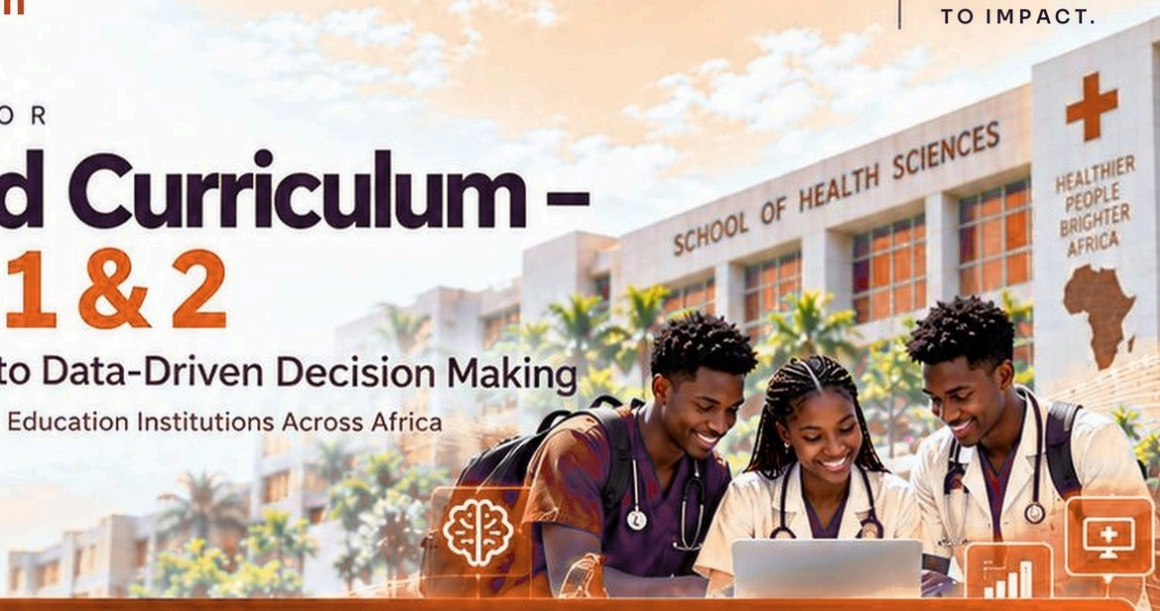
- **Productivity AI Tools** — Integrated at every level for stronger impact and faster learning.
- **Real-World Mini Projects** — Hands-on projects and use cases in every level.
- **Portfolio-Ready Outcomes** — Build a strong portfolio for placements and healthcare innovation.
- **Faculty Enablement Compatible** — Designed for seamless adoption in academic environments.
- **El Roi Nexus AI Platform Support** — Platform access, content and guided learning.

PROPOSAL FOR

Detailed Curriculum – Levels 1 & 2

From AI Literacy to Data-Driven Decision Making

Healthcare Track | Higher Education Institutions Across Africa



LEVEL 1 — AI Foundations & Intelligent Productivity

Build strong AI foundations and use AI tools for smarter academic and personal productivity.

A PROGRESSIVE AI JOURNEY ACROSS FIVE LEVELS

Industry Skills Covered

- What is AI and how it works
- Types of AI and real-world examples
- Prompt engineering basics
- AI productivity tools
- Research assistance
- Document drafting
- Presentations
- Spreadsheet support
- Responsible AI and ethics

Hands-on Use Cases

- **Summarize medical literature** (use AI to extract key points from research papers)
- **Create study notes and flashcards** (generate concise notes and revision materials)
- **Prepare presentations and reports** (build slide decks and academic reports)
- **AI-powered communication and email drafting** (write professional emails and patient-facing communication templates)
- **Research and interview prep** (collect and summarize information for academic assignments)

Outcome



Learners confidently use AI tools for learning, communication and productivity.

LEVEL 2 — Applied Data Analysis & AI for Decision Making

Develop data skills and apply AI to analyse information and generate insights.

A PROGRESSIVE AI JOURNEY ACROSS FIVE LEVELS

Industry Skills Covered

- Data basics and data types
- Working with datasets
- Data analysis with Python or no-code tools
- Visualization and storytelling
- AI for market, social and consumer analysis
- Intro to healthcare analytics and dashboards
- Document intelligence
- AI for research and decision support

Hands-on Use Cases

- **Analyse public health or patient-survey trends** (work with real datasets to identify patterns and trends)
- **Generate insights from survey data** (use AI to summarize and interpret survey results)
- **Create interactive dashboards** (build visualizations using Python or no-code tools)
- **Research and compare information** (analyse multiple data sources and synthesize findings)
- **Automate data reporting** (set up AI-assisted workflows for regular reports)

Outcome



Learners work with real-world data, create visualizations and use AI to support academic and operational decisions.

75 Hours per Level
30 Hours Theory + 45 Hours Hands-on

Flexible Delivery
On-campus, blended or fully online

Real-World Projects
Hands-on use cases in every level

Industry-Oriented Certification Readiness
Portfolio and career readiness

Productivity AI Tools in Every Level
Stronger impact and faster learning

El Roi Nexus AI Platform
Platform access, content and guided learning

FROM POTENTIAL TO IMPACT.

PROPOSAL FOR

Detailed Curriculum – Levels 3 & 4

From Generative AI to Intelligent Automation

Healthcare Track | Higher Education Institutions Across Africa



LEVEL 3 — Generative AI & Clinical Domain Applications

Apply generative AI to solve real problems in healthcare, research and patient communication.

DOMAIN FOCUSED AI FOR HEALTHCARE INNOVATION

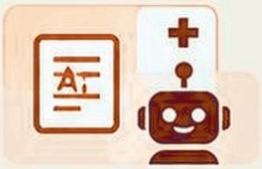
Industry Skills Covered

- Large language models and applications
- Advanced prompting techniques
- AI content generation (text, images, structured)
- Document intelligence and knowledge assistants
- AI for medicine, nursing, pharmacy, public health and healthcare management
- Introduction to RAG basics
- Healthcare domain workflows and use cases
- Introduction to multimodal AI (text, image, audio)

Hands-on Use Cases

- **Build a research knowledge assistant** (search and summarize medical literature)
- **Analyze and summarize long documents** (clinical guidelines, research papers, policy documents)
- **Create patient education or domain-specific content** (nutrition guides, disease information)
- **Generate policy briefs and reports** (for academic or healthcare institutions)
- **Design simple infographics and insight summaries** (visual content for patients and stakeholders)

Outcome



Learners build useful **domain-focused AI applications using GenAI and RAG basics.**

LEVEL 4 — AI Agents & Automation for Healthcare Workflows

Build AI agents and workflow automations to improve productivity and solve complex problems.

INTELLIGENT AUTOMATION FOR HEALTHCARE OPERATIONS

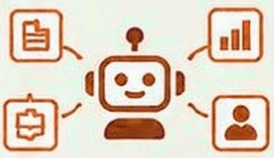
Industry Skills Covered

- AI agents and tool calling (function calling)
- Multi-step agent workflows
- Automation with no-code and low-code tools
- Integrations with common applications (EMR systems, Google Workspace, Microsoft 365, etc.)
- Human-in-the-loop workflows
- AI for operations, marketing, HR and finance support
- Security, governance and responsible AI (in healthcare contexts)

Hands-on Use Cases

- **Automate research and reporting workflows** (literature monitoring, compliance reports)
- **Build an AI customer support helper** (for patient queries or institutional FAQs)
- **Create automated forms and document workflows** (e.g., admissions, clinical forms, summaries)
- **AI for invoice and operations tasks** (procurement, scheduling, admin support)
- **Multi-step assistants for domain problems** (combine data retrieval, analysis and action)

Outcome



Learners design and **build agents that automate repetitive work and improve efficiency.**

Flexible Delivery
On-campus, blended or fully online options

Faculty-Supported Adoption
Training, resources and implementation help

Industry-Oriented Learning
Real-world projects and use cases

Portfolio Development
Hands-on projects in every level

El Roi Nexus AI Platform Access
Guided content, tools and learning resources

PROPOSAL FOR

Detailed Curriculum – Level 5 & Capstone Studio

Advanced Applied AI, Innovation & Real-World Impact

Healthcare Track | Higher Education Institutions Across Africa



LEVEL 5 — AI Product Development & Innovation

Apply end-to-end AI product development skills to create impactful solutions for healthcare, society and research.

INNOVATE
BUILD
DEPLOY
CREATE IMPACT

Industry Skills Covered

- AI product design and user-centric thinking
- Problem framing and domain discovery
- Rapid prototyping and MVP development
- Integrating AI models and APIs
- Low-code or no-code solution building
- Solution testing and iteration
- Deployment fundamentals
- Measuring impact and ROI
- Future trends in AI and career pathways

Hands-on Use Cases

- **Build a mini AI-powered** healthcare application
- Create a research or operational MVP
- Develop a hospital, clinic, public-health or community use-case solution
- Solve a local challenge through AI
- Present a showcase-ready prototype

Learner Outcome



Learners design, build, test and present an **end-to-end applied AI product or innovation concept.**

Integrated Capstone Studio

From Ideas to Real-World Healthcare Impact

IDEATE
BUILD
TEST
PRESENT

Capstone Components

- Problem selection (real-world, industry or community)
- Solution scoping and planning
- Data/content setup
- Workflow design and implementation
- Testing and iteration
- Demo day presentation

Platform & Tool Exposure

- El Roi Nexus AI platform
- Prompt tools and AI assistants
- Dashboards and analytics tools
- No-code/low-code tools
- APIs and integrations
- Collaboration and project management tools

Final Deliverables

- Working prototype (application or solution)
- Presentation deck with impact analysis
- Documentation (process, technical or user guide)
- Portfolio artifact

75 Hours for Level 5
30 Hours Theory + 45 Hours Hands-on

Project-Based Learning
Real-world, industry-relevant applications

Industry-Oriented Certification
Portfolio and career readiness

El Roi Nexus AI Platform
Platform access, content and guided learning

PROPOSAL FOR

Delivery Model & Learning Experience

Flexible. Practical. Future-Ready.



A blended, hands-on learning experience designed for healthcare graduates to build real AI skills, work on practical projects and gain career-ready competencies for the evolving healthcare landscape.

1 Immersive Modular Delivery

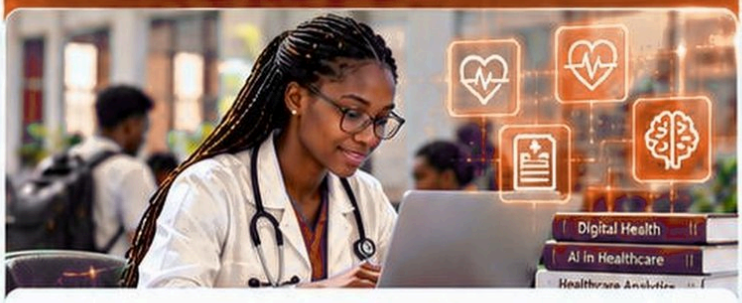
5 to 6 day intensive blocks with guided practice and mini-projects.



- **On-Campus Delivery** — Delivered at partner institutions
- **5–6 Days Intensive Blocks** — Focused hands-on learning sprints
- **Guided Practice & Mini-Projects** — Daily labs, mentoring and real-world tasks
- **Faculty Supported** — Co-delivered with faculty and industry experts

2 Embedded Academic Delivery

Weekly or periodic sessions integrated into the academic calendar.



- **Integrated Schedule** — Aligned with your academic calendar
- **Blended Delivery** — In-person and online options
- **Continuous Lab Practice** — Weekly labs, assignments and checkpoints
- **Platform Enabled** — Access to El Roi Nexus AI platform and learning resources

LEARNING METHODOLOGY

A structured learning journey from foundations to real-world healthcare impact.

1. **Learn** — Concepts, tools and best practices
2. **Experiment** — Hands-on labs with guided notebooks
3. **Build** — Mini-projects to apply skills
4. **Apply** — Solve real healthcare use cases and industry problems
5. **Demonstrate** — Present solutions, get feedback and build a portfolio

HANDS-ON COMPONENTS

Rich, practical learning experiences to build technical depth and confidence.

- **Coding & No-Code Labs** — Hands-on programming environments
- **Guided Notebooks** — Step-by-step exercises and explanations
- **Prompt Labs** — Work with generative AI tools for healthcare
- **Mini-Projects** — Apply learning in practical healthcare scenarios
- **Assignments** — Regular tasks and assessments
- **Capstone Development** — End-to-end project in final level
- **Faculty Mentoring** — Expert guidance and review sessions
- **Platform Access** — El Roi Nexus AI platform with datasets and tools

LEARNING EXPERIENCE

A comprehensive, high-impact learning experience designed for healthcare graduates.

- **75 Hours per Level** — 30 Hours Theory + 45 Hours Hands-on
- **30 Hours Theory** — Core concepts, healthcare AI foundations
- **45 Hours Hands-on** — Labs, projects and real-world practice
- **Real-World Use Cases Across Disciplines** — Clinical, operational and public health applications
- **Project-Based Progression** — Build a portfolio of solutions across every level

PROPOSAL FOR

Projects, Assessment & Certification Readiness

Learn | Build | Showcase | Get Certified | Be Career Ready

Healthcare Track – Applied Learning. Real Outcomes.



1. Project Progression Roadmap

A structured, progressive learning journey from foundational skills to real-world healthcare AI solutions.

2. Assessment Framework

A balanced evaluation approach to ensure conceptual clarity, practical skills and real-world application.

20%	20%	25%	25%	10%
Participation & Attendance	**Quizzes**	**Guided Labs**	**Mini-Projects**	**Final Project / Demo**
Active involvement in classes, discussions and peer learning	Concept checks to reinforce learning	Hands-on exercises and applied learning	Build and solve real-world healthcare use cases using AI tools	Capstone showcase and presentation

3. Certification Readiness

Aligned with industry-relevant skills and globally recognized certification areas.

Foundation Stage

Build core skills and earn early certifications.

- AI awareness and ecosystem understanding
- Prompt engineering fundamentals
- Data literacy for healthcare applications
- Responsible AI basics (ethics, safety and bias)

Advanced Stage

Specialize in applied AI and enterprise-ready skills.

- AI application development for healthcare use cases
- Generative AI and RAG systems for clinical and domain data
- Agentic systems awareness and multi-agent workflows
- Analytics and workflow automation for healthcare operations

4. Key Outcomes for You

Practical benefits that prepare you for real-world opportunities.

Portfolio-Ready Artifacts	Stronger AI Productivity	Real Project Exposure	Improved Employability
Completed projects to showcase your skills	Practical skills to work smarter and faster	Experience with real healthcare use cases	Be ready for internships, placements and career growth

PROPOSAL FOR

Commercial Model, Roles & Institutional Impact

A Flexible Pathway for Scalable AI Enablement in Higher Education



1. Commercial Model

Flexible and scalable partnership options to suit different institutional needs.

1 Per-Student Pricing
Transparent, affordable pricing per student.

2 Per-Level Engagement
Pricing options based on individual or multi-level engagement.

3 Bundled Programs
Cost-effective bundles across multiple levels.

4 Annual Platform Access Options
Institution-wide or cohort-based platform plans.

5 Faculty Enablement Add-ons
Optional training, certification and ongoing support for faculty and academic staff.

6 Custom Implementation Support
Onboarding, integration and program design support.

Final commercials depend on cohort size, program scope, delivery model and any customization or integration requirements.

2. Roles & Responsibilities

A partnership model with clear and complementary roles.

El Roi Education Responsibilities
Platform, Content and Enablement Support

- Provide platform access and technical infrastructure.
- Design and curate content and curriculum.
- Develop guided learning assets.
- Provide assessment templates and rubrics.
- Share real-world project frameworks.
- Support faculty onboarding and enablement.
- Provide progress reporting and learning analytics.

Institution / Partner Responsibilities
Local Delivery, Facilitation and Governance

- Student enrolment and cohort management.
- Classroom, lab and infrastructure coordination.
- Faculty facilitation and student support.
- Academic scheduling and calendar alignment.
- Local mentoring and project guidance.
- Attendance and participation tracking.
- Approvals and governance support.

3. Institutional Impact

Enabling long-term value for students, faculty and institutions.

AI-Enabled Student Learning
Future-ready skills for modern healthcare careers.

Stronger Project Portfolios
Real-world, industry-relevant healthcare AI projects and case studies.

Faculty-Supported Adoption
Build internal capacity through training, certification and ongoing support.

Internship & Innovation Readiness
Practical experience and exposure to healthcare AI workflows and tools.

Improved Employability
Graduates ready for healthcare AI roles, advanced study and industry opportunities.

Scalable AI Adoption
A repeatable model to expand AI education across departments and institutions.

Healthcare AI Readiness Outcomes

Students progress from AI literacy to real-world healthcare AI application, automation and innovation, ready for modern workplaces and advanced study.

PEOPLE
SKILLS
INNOVATION
REAL IMPACT