FEMI SAMSON INSTITUTE OF ARTIFICIAL INTELLIGENCE & BIOMEDICAL RESEARCH

The Physiologist, *Reimagined*

From Biological Science to Artificial Intelligence, Innovation, Entrepreneurship and the Future of Work



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SPAN WEBINAR

22 November 2026 • 7:30 PM WAT

What Happens After the Physiology Degree?

THE EXPECTED ROUTE

Conventional Destinations

Postgraduate study, lecturing, and hospital lab roles.

- Postgraduate study
- Lecturing
- Hospital lab roles

THE EXPANDING ROUTE

Interdisciplinary Frontiers

Digital health, medtech, data science, and public health.

- Digital health
- Medtech
- Data science
- Public health

ATTENDEE QUESTION • CAREER TRANSITION

“How can a Physiology graduate move into technology without abandoning or wasting their academic background?”

The Work Around Physiology Is Changing

AI & Machine Learning

Pattern recognition, prediction, and decision support.

Digital Health

Connected care, health platforms, and data systems.

Biomedical Engineering

Devices, sensors, and human-centred technologies.

Computational Science

Models, simulation, and reproducible analysis.

Public Health Intelligence

Surveillance, forecasting, and population insight.

Entrepreneurship

Turning unmet needs into products and services.

ATTENDEE QUESTION • EMERGING SECTORS

“What specific opportunities exist in health-tech, digital health, AI, and biomedical technology?”

Six Career Frontiers for Physiologists

01

Clinical & Healthcare

Clinical research, health data, and medtech.

02

Sports & Performance

Exercise science, human performance, and wearables.

03

Research & Academia

Experimental science and computational research.

04

Technology & Engineering

Digital health, biomedical devices, and informatics.

05

Public Health & Policy

Epidemiology, surveillance, and health intelligence.

06

Business & Entrepreneurship

Health ventures, consulting, and product innovation.

ATTENDEE QUESTION • VENTURE DISCOVERY

“How can a Physiology graduate identify entrepreneurship opportunities in healthcare and biotechnology?”

Where Physiology Meets Artificial Intelligence



Cardiovascular

ECG, HRV, rhythm, and signal analysis.



Neurophysiology

EEG, neural signals, and pattern analysis.



Computational Models

Measurements translated into predictive scenarios.



Human Performance

Wearables, activity, and response patterns.



ATTENDEE QUESTION • APPLIED INTEGRATION

“How can a Physiology graduate combine biological knowledge with technology to solve real healthcare challenges?”

Extending Scale Without Losing Reasoning



ECG & Heart-Rate Variability

Automated waveform feature extraction for autonomic and cardiac insight.



EEG & Neural Dynamics

Multi-channel frequency decoding for neurological and cognitive research.

YOUR PROFESSIONAL JOURNEY

I Did Not Leave Physiology to Enter Technology

01 — Physiology

Biological systems and human function.

02 — Healthcare Data

Clinical observations and useful information.

03 — Biomedical Eng.

Medical-device research and prototyping.

04 — Public Health

Epidemiology, data science, and modelling.

05 — Institution Building

FSI-AIBR: AI and biomedical research.

? ATTENDEE QUESTION • UNDERGRADUATE ROADMAP

“Can someone start building a technology career while still studying Physiology, and what roadmap works?”

PROJECT SHOWCASE

Examples of Problems We Can Build Around

SPATIAL INTELLIGENCE

Nigeria Malaria Digital Twin

High-resolution transmission risk modelling across 774 LGAs.

RESEARCH PLATFORM

Global Malaria Watch

Cross-country epidemiological patterns using public datasets.

EDUCATION PROTOTYPE

PhysioLab Intelligence

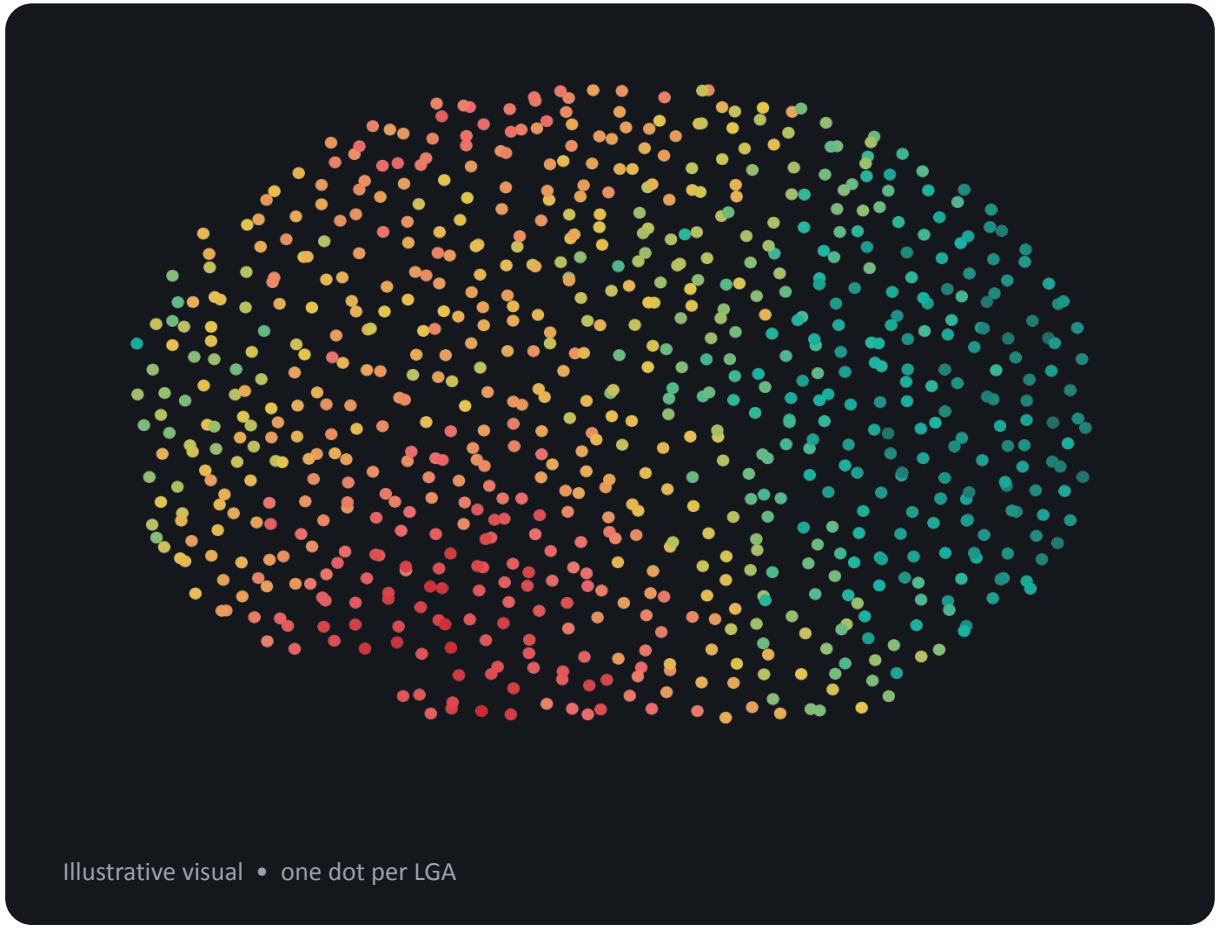
Research prototype for physiological data workflows.

ATTENDEE QUESTION • RESEARCH-TO-PRODUCT TRANSLATION

“How can a Physiology graduate transform a research idea or healthcare gap into a viable product?”

SYSTEM SPOTLIGHT

Nigeria Malaria Digital Twin



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Local Government Areas — integrating environmental and epidemiological intelligence

SCIENTIFIC PROBLEM

Granular transmission risk varies sharply across local districts.

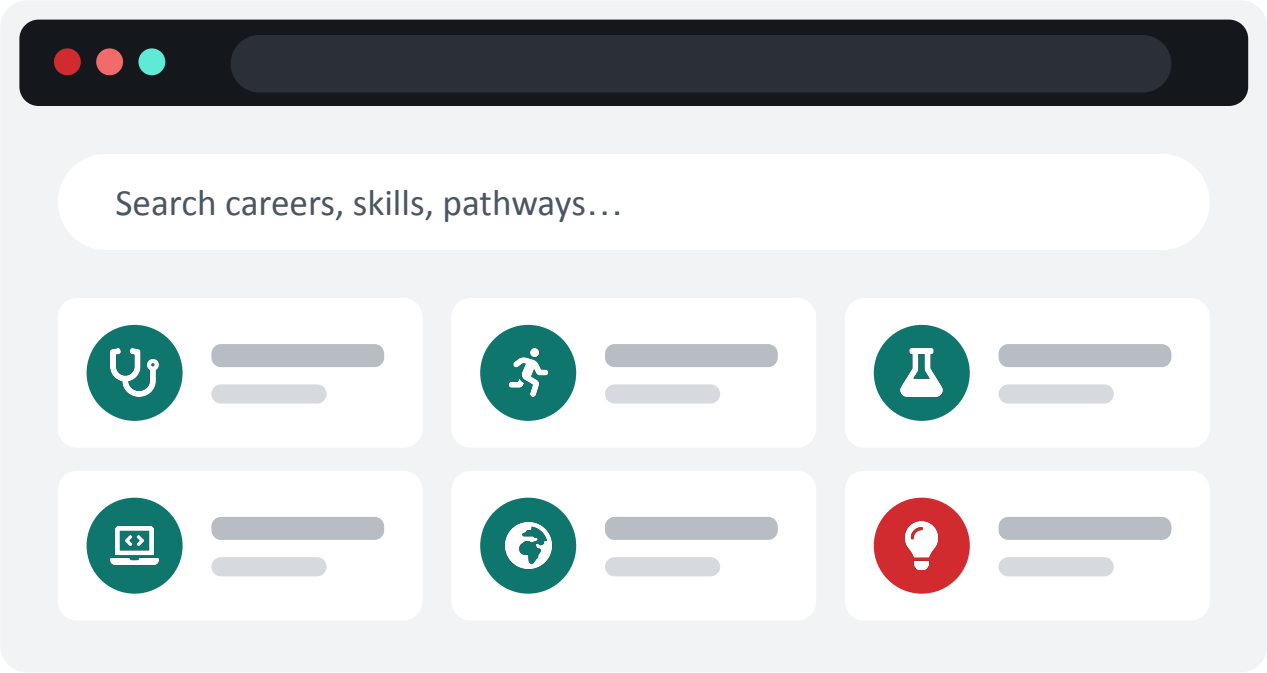
METHOD

Integrating host-vector biology, climate variables, and spatial models.

VALUE OF INSIGHT

Enables targeted public health planning over generic averages.

FSI-AIBR Career Intelligence



LIVE DEMO • 2–3 MIN

Helping graduates explore pathways beyond familiar job titles.

Explore Search and browse six interdisciplinary career pathways.

Understand Review role profiles, required skills, and education routes.

Plan Connect biological interests to practical capability development.

ATTENDEE QUESTION • DATA & SOFTWARE ROLES

“What opportunities exist in health data analysis, medical software, digital health, and health informatics?”

Skills Differentiating the Next Generation

6

capabilities that set the next generation apart

Biological Depth

Understand systems, mechanisms, and measurement.

Data Literacy

Work with structured data, quality, and uncertainty.

Computational Tools

Practical fluency in Python, analysis, and visualisation.

AI Understanding

Know what models do—and where they fail.

Research Methods

Ask answerable questions; validate and reproduce.

Communication & Enterprise

Translate evidence into decisions, products, and teamwork.

ATTENDEE QUESTION • TECHNICAL PRIORITISATION

“Should students prioritise programming, data analysis, UI/UX design, product management, or AI first?”

Proposed Training: AI in Physiology

DAY

01

CURRICULUM FOCUS

AI/ML foundations, biomedical signals & ethics

EXPECTED OUTCOME

Understand landscape, use cases, and limitations

DAY

02

CURRICULUM FOCUS

Python, data prep, ECG/EEG & visualisation

EXPECTED OUTCOME

Analyse and visualise structured physiological data

DAY

03

CURRICULUM FOCUS

Mini application, interpretation & portfolio steps

EXPECTED OUTCOME

Complete a small demonstrable learning project

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What We Could Build Together

SPAN BRINGS

Community & Authority

Professional reach, academic credibility, and member engagement.

+

FSI-AIBR BRINGS

Technical Execution

Biomedical AI context, curriculum design, and learning projects.

=

PARTICIPANTS GAIN

Applied Evidence

Relevant skills, portfolio proof, and wider career options.

ATTENDEE QUESTION • ENTREPRENEURSHIP & CORPORATE CAREERS

“How do we build health-tech ventures, biomedical research organisations, and pharmaceutical corporate careers?”

DISCOVER • UNDERSTAND • DEVELOP • BUILD

The Future Belongs to Those Who Build It



The question is no longer whether physiology has a place in technology—it is whether we are preparing our physiologists to help build that future.

Daniel Onimisi • Founder & Executive Director, FSI-AIBR

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Links in chat