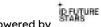
Expanding the AI Immersion Course to integrate Advanced Math for Medical Applications could create a unique and high-value program. This would attract students and professionals in medicine, biomedical research, and healthcare AI. Below is a structured approach on how we could develop this course as a new AI-powered learning module under The IDFS existing framework

"Your Future. Your Move" Program



AI + Advanced Math for Medical Applications Course

Objective:

To equip students and medical professionals with Al-driven mathematical modeling skills for medical diagnostics, research, and healthcare decision-making.

- Course Breakdown: AI & Math in Medicine
- 1. K-12 Foundation: Al-Powered Math Learning for Future Doctors
 - Target Audience: High school students (pre-med track)
 - Topics Covered:
 - Al-driven adaptive learning for Algebra, Geometry, and Pre-Calculus
- Simulating real-world medical math scenarios (dosage calculations, vitals monitoring)
 - Al tutoring for AP Biology, Chemistry, and Physics
 - Virtual patient case studies with Al-automated diagnostics
- Al Integration:
- Al-powered tutoring and personalized math problem-solving
- ✓ Interactive virtual medical simulations
- ✓ Gamified Al-based problem sets

- Target Audience: Undergraduate students (pre-med, biomedical engineering, health data science)
 - Topics Covered:
 - Biostatistics & Data Analytics using Al for medical research
 - Physics-based AI models for cardiovascular & neuroimaging
 - Al-powered drug interaction calculators
 - Machine Learning in Genetics & Personalized Medicine
- Al Integration:
- ✓ Al-driven biostatistical analysis software
- ✓ ML-based disease prediction models
- ✓ Al-assisted medical image processing & segmentation
- 3. Medical School Al Integration: Precision Medicine & Al Automation
 - Target Audience: Medical students, residents
 - Topics Covered:
 - Al-driven drug dosage and pharmacokinetics modeling
 - Al-assisted robotic surgery & biomechanics
 - Al-powered ECG interpretation and radiology analytics
 - Predictive AI modeling for epidemiology & patient outcomes
- Al Integration:
- Al-powered virtual patients for diagnostics
- Al-based medical imaging training platform
- Personalized Al-based clinical decision-making simulations

- - Target Audience: Practicing doctors, researchers, biotech professionals
 - Topics Covered:
 - Al-driven diagnostic tools for clinical decision support
 - Deep learning for medical imaging (CT, MRI, Ultrasound)
 - Al-powered hospital workflow automation & patient data analytics
 - Al in genomics & precision therapy
- Al Integration:
- Al-powered decision support dashboards
- ✓ Al-generated personalized treatment recommendations
- Real-time AI monitoring for ICU & emergency medicine
- Monetization & Business Model
- Premium Al Immersion Course Package
- Subscription-based access for medical students & professionals
- Certification for Al-powered Medical Math Competency
- Next Steps: Prototyping Al Models for the Course
 - 1. Build Al-powered virtual problem sets (medical dosage, imaging, diagnostics).
- 2. Develop a prototype for Al-driven medical calculations in pharmacology & radiology.
 - 3. Incorporate real-world case studies with Al-assisted decision-making tools.