

FRANCIS LUFWENDO

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EDUCATION

Yeshiva University, Katz School of Science and Health, New York, NY Expected May 2027
M.S. Biotechnology Management and Entrepreneurship | GPA: 4.0 | Coursework: Venture Creation, Regulatory Affairs, Bioinformatics, CRISPR

Marwadi University, Gujarat, India May 2024
Bachelor of Pharmacy | GPA: 3.87

Publication: Co-authored 'AI and Machine Learning in Drug Discovery' in *Modern Approaches in Drug Discovery*

TECHNICAL SKILLS

Programming: Python, JavaScript, SQL, HTML/CSS, C++ (familiar)

AI/ML & Data Science: PyTorch, TensorFlow, scikit-learn, LangChain, RAG Systems, NLP, LLM Fine-tuning, Pandas, NumPy

Web & Backend: React, Node.js, Express.js, Flask, RESTful APIs, MongoDB, PostgreSQL, MySQL, ElasticSearch

Tools & Domain: Git/GitHub, Docker, AWS, Agile/Scrum | FDA Regulatory Affairs, Clinical Research, Biotech R&D

EXPERIENCE

RegComplyAI – AI-Powered FDA Compliance Platform | regcomplyai.org New York, NY
Founder & Lead Developer Aug 2025 – Present

- Architected production-level full-stack application using MERN stack (MongoDB, Express, React, Node.js) to automate FDA regulatory compliance workflows for biotech startups
- Implemented Retrieval-Augmented Generation (RAG) pipeline using LangChain and OpenAI APIs to parse 500+ FDA regulatory documents, reducing compliance research time by 60%
- Designed scalable RESTful API endpoints handling complex scientific workflow automation including document management, submission tracking, and regulatory timeline visualization
- Integrated Python-based NLP document processing pipeline with React frontend, debugging dependency conflicts and optimizing cross-platform system compatibility

Education-24 – Non-Profit College Access Platform | education-24.com Lusaka, Zambia
Co-Founder & Software Developer Sep 2021 – Present

- Co-founded initiative providing free college access support to high-achieving, low-income students; secured over \$2M in scholarships for program participants across Southern Africa
- Designed and maintained full-stack web platform enabling scalable student outreach and application tracking; established partnerships with US educational institutions

PROJECTS

AI/ML Research – Drug Discovery: Published research on machine learning applications in pharmaceutical drug discovery, exploring neural network architectures for molecular property prediction

Data Visualization Platform – ESAWAS Zambia: Built full-stack data visualization platform processing large-scale datasets for regional infrastructure analysis using Python, React, and SQL databases

ADDITIONAL

Honors: STEM Fellows Scholarship 2025, Government of India Scholarship Recipient 2021

Professional Development: Active participant in Harvard Biotech Club webinars and NVIDIA AI technology meetups

Languages: English (fluent), Tonga and Nyanja (native), Swahili (conversational), Hindi (basic)