







# LINCOLN KAMAU KIARIE, PhD

AI RESEARCHER

## CONTACT

-  <https://linc-coder.github.io/>
-  [linc.code@gmail.com](mailto:linc.code@gmail.com)
-  UK
-  <https://www.linkedin.com/in/lincoln-k/>
-  <https://github.com/kamaulincoln/>
-  [Google Scholar Profile](#)

## PERSONAL STATEMENT

With over 10 years of experience in programming, I now specialise in creating robust Reinforcement Learning (RL) models to solve critical challenges in computer networks, network security and in personalised healthcare. My research is driven by the goal of creating robust and trustworthy AI systems that can safely enhance human well-being. My doctoral research addressed the critical challenge of congestion control, focusing on RL training and AI safety. I have led a team of five doctoral researchers in developing a patent pending AI-powered insulin delivery tool to assist children with Type 1 Diabetes. I have authored or co-authored 5 journal papers and 11 conferences papers, and supervised over 20 undergraduate students in their final year projects.

## EDUCATION

### PHD ELECTRICAL, ELECTRONIC AND SYSTEMS ENGINEERING (2025)

- Loughborough University

### MSC TELECOMMUNICATION ENGINEERING (2019)

- Jomo Kenyatta University of Agriculture and Technology

### BSC TELECOMMUNICATION & INFORMATION ENGINEERING (2006)

- JKUAT: First Class honours

## SKILLS

- Programming Languages (Python, MATLAB, Java, C/C++, Assembly)
- AI Development (Git, Tensorboard, Weights & Biases)
- Writing (Latex, MS Word, Obsidian)
- Visualisation & Image processing
- Leadership
- Problem solving (Chess player)

## Python Libraries

- Numpy, Pandas, Matplotlib, Seaborn
- Pytorch, Stablebaselines3, CleanRL,...

## LANGUAGES

- English: Fluent
- Kiswahili: Fluent
- Kikuyu: Fluent

## WORK EXPERIENCE

### Loughborough University (2022-2025)

#### Doctoral Researcher

- Developed a novel Reinforcement Learning (RL) approach to integrating a rule-based algorithm to guide exploration.
- Developed a framework for safe AI using cost constraints to encourage safe behaviour during training.
- Led a team of five PhD researchers to develop an AI-powered tool to help manage the blood sugar levels of Type 1 diabetic children.

### Loughborough University (2023 - 2024)

#### Research Associate, Security Engineering (Machine Learning)

- Led the development of a simulated learning environment for implementing AI strategies in defences.
- Authored periodic reports and gave presentations to DSTL.
- Onboarded new team members and allocated tasks for effective coordination.

### Jomo Kenyatta University of Agriculture and Technology (JKUAT) (2011 - 2025)

#### Tutorial Fellow/ Teaching Assistant

- Taught Computer Programming, Network Security and Cryptography, Computer Networks, Microprocessors, DBMS, Operating Systems and other courses.
- School Representative for Community Engaged Learning, run by Western University, Canada.

### Freelance Consultant (2011 - 2021)

#### Software developer & Coaching

- Developed "Traffic Light Simulator" for Nation Media Group to model cars moving at a roundabout controlled by traffic lights.
- Successfully deployed a "Graph data extractor" tool for recovering data points from a 2D graphical image.

## AWARDS & DISTINCTIONS

- Three Minute Thesis finalist** - Wolfson School, Loughborough University 2025
- Most Innovative Paper Award** at the 1<sup>st</sup> Int. workshop on Autonomous Cyber, Salt Lake City, U.S.A. 2024.
- Commonwealth Scholarship Award** (2021)
- National Mathematics Contest** - 2<sup>nd</sup> & 3<sup>rd</sup> Position in 2004 & 2005