

# KELLY DIANG'A

## SOFTWARE ENGINEERING POSTGRADUATE | ASPIRING SOFTWARE DEVELOPER

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### ABOUT ME

I'm a master's student in Software Engineering with a strong interest in software development and innovation. With a background in Robotics and Mechatronics, I have cultivated hands-on coding experience and am currently enhancing my expertise in Java, pair programming, unit testing, Object-Oriented Programming, and Agile methodologies. I have experience with Python, C++, and web technologies, and enjoy contributing to the development of user-focused applications that are reliable and maintainable. I'm eager to gain real-world experience in developing secure, sustainable and high-quality software while bringing creativity, problem-solving skills, and a collaborative mindset to the team.

### EDUCATION

#### Msc. Software Engineering with Placement Year

Cardiff University (Ongoing)

- Relevant Coursework:
- Agile Software Development

#### Bachelor of Engineering (Honours) in Robotics and Mechatronics

Upper Second Class(2:1), GPA 3.29/4

Swinburne University of Technology (2025)

- Relevant Coursework:
- Creating Web Applications
  - Managing Software Projects
  - Professional Issues in IT
  - Calculus and Applications

#### Kenya Certificate of Secondary Education

The Kenya High School (2018)

Grade: A-

### SKILLS

#### SOFT SKILLS

- Creativity and Problem-solving
- Teamwork and Communication
- Leadership and Flexibility
- Time management and Organization

#### PROGRAMMING LANGUAGES

- Python
- Java
- JavaScript
- C++

#### WEB TECHNOLOGIES

- HTML, CSS

#### VERSION CONTROL

- Git, GitHub, GitLab

#### FRAMEWORKS & LIBRARIES

- Spring boot
- Flask
- Laravel

### AWARDS AND RECOGNITIONS

- Interclub Futsal Tournament  
Champion – Swinburne Team (2024)
- Cultural Night Lead Performer –  
Africa Unites Club (2023)
- Dean's List of Top Achievers (2021)

### PROFESSIONAL EXPERIENCE

#### STEM AMBASSADOR

(Ongoing)

Cardiff University & Technocamps, United Kingdom

- Engaged and inspired 100+ students through workshops and STEM outreach activities.
- Facilitated hands-on sessions on building and programming robots using LEGO SPIKE to promote interest in engineering and technology careers.

#### PROCESS ENGINEER INTERN

(2025, 2023)

Isuzu East Africa, Kenya

- Collaborated on a web-based Part Verification and Distribution system using HTML, CSS, JavaScript, and MySQL to improve traceability and data management in production workflows.
- Conducted work studies to identify process inefficiencies, contributing to new procedures that reduced operation time by 15% and enhanced workflow consistency.

#### FREELANCE BUSINESS OWNER

(2022 - 2025)

Afroluxecrown Hair Braiding Services, Malaysia

- Founded and operated a successful side business serving serving over 50 clients across Malaysia.
- Increased customer reach and retention by by 30% through effective marketing, client relationship management, and service delivery.
- Provided tailored consultations, tracked client enquiries, and ensured efficient follow-up communication to maintain high satisfaction.

### ACADEMIC AND PERSONAL PROJECTS

#### COMMUNITY COMMUNICATION BROADCAST SYSTEM

(Ongoing)

- Skills Applied: Spring Boot, Java, Thymeleaf, JavaScript, MySQL, Agile (SCRUM), Pair Programming, Unit Testing, Git/Gitlab, Teamwork, leadership
- Leading a team to develop a full-stack web application which allows organisations to broadcast business updates to residents in real time.
- Implemented backend APIs, frontend interfaces, and database integrations to ensure a responsive and intuitive experience for both desktop and mobile users.
- Designed interactive map and information panels for businesses, enabling dynamic content display including links, promotions, and navigation between streets.

#### VET CLINIC APPOINTMENT MANAGEMENT SYSTEM

(2025)

- Skills Applied: Java, GitLab, Object-Oriented Programming(Encapsulation, Inheritance, Polymorphism), Data Structures & Algorithms, Debugging & Testing
- Developed a command-line appointment booking application to to manage appointments, pets, owners, and veterinarians using modular OOP architecture.
- Enhanced system performance and maintainability through code refactoring, debugging and version control using GitLab.

#### AI-POWERED HUMAN-FOLLOWING ROBOT

(2023 - 2024)

- Skills Applied: SOLIDWORKS, Python, C++, Artificial Intelligence, Computer Vision, Machine Learning, Prototyping, Embedded Systems
- Developed an autonomous robot prototype to assist elderly individuals by carrying belongings, utilizing Raspberry Pi, TensorFlow Lite, and OpenCV for real-time human detection and safe navigation.
- Implemented template-matching-based distance calculation between the robot and target, achieving ~98% accuracy for precise and reliable following behavior.