

# Patrick Kipkoech

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## Software Engineer/Software Developer

Software engineer with a proven track record in developing scalable web applications and optimizing business processes. Equipped with a Computer Science degree and specialized training from Moringa School, I bring expertise in full-stack development using React and Flask frameworks. My technical arsenal includes database management (SQLAlchemy, MongoDB) and automation solutions with Docker and web scraping technologies.

I excel in collaborative environments where I can apply my technical problem-solving abilities to create impactful solutions.

I am seeking opportunities to leverage my skills in building innovative digital products while continuing to grow professionally in a dynamic technology landscape.

## EXPERIENCE

**The Micropoint Systems LTD • Nairobi, Kenya • 06/2022 — 09/2022**

### Software Developer Intern

Designed and developed a **COVID-19 tracking application** using **C#**, enabling users to access real-time statistics on cases, recoveries, and fatalities.

- Integrated **APIs** for real-time data updates and implemented a clean, user-friendly interface for seamless user interaction.
- Strengthened skills in **API integration, data-driven application development, and problem-solving** in a real-world context.
- Collaborated with team members to ensure timely delivery and adherence to project requirements.
- Gained hands-on experience in the **software development lifecycle** and **agile methodologies**.

## EDUCATION

### Course in Software Development

Moringa School • Nairobi • 08/2024 — Present

- Gaining hands-on experience in **full-stack development** using **React** (Frontend) and **Flask** (Backend).

### Bachelor in Computer Science

Karatina University • Nyeri, Kenya • 01/2019 — 12/2023

- Completed coursework in **software engineering, data structures, algorithms, and database systems**.

## SKILLS

**Programming Languages :** Python, JavaScript, C#, SQL, TypeScript

**Testing Tools:** Mocha, Jest, PyTest, React Testing Library

**Frameworks & Libraries:** React, Flask, SQLAlchemy, Next.js

**Database Management:** MongoDB, SQL, PostgreSQL, SQLite

**Tools & Platforms:** Docker, GitHub, Visual Studio, Render, Git, Github Actions, Trae

**Web Technologies:** HTML, CSS, Tailwind CSS

**Deployment** Render, Vercel, Github Actions, Netlify

**Other Skills:** API Integration, Web Scraping, Responsive UI Design, Agile Methodologies

## CERTIFICATIONS

**Docker Certification** • 09/2023

KodeKloud

**Python Certification** • 09/2023

KodeKloud

## PROJECTS

**SchoolBasi - School Minibus Booking System** • [Link](#)

- Collaborated on developing a **comprehensive transportation management platform** for schools using **Next.js (frontend)** and **Flask with PostgreSQL (backend)** to address safe and affordable student commuting challenges.
- Implemented **real-time bus tracking functionality** using **Leaflet** to provide parents with location updates, and arrival notifications. Developed a secure **user authentication system** with **NextAuth.js** for distinct parent, driver, and administrator access levels.
- Created an **interactive route selection interface** allowing parents to choose appropriate bus routes based on their location and receive automated notifications. Contributed to the **admin dashboard development** for comprehensive management of bookings, routes, buses, and user profiles.
- **Key Achievement:** Successfully integrated payment processing and notification systems that improved parent engagement and reduced administrative workload by 40%.
- **Technologies Used:** Next.js, React, Tailwind CSS, Flask API, PostgreSQL, Google Maps API, Leaflet, NextAuth, Framer Motion, Axios.

**Blog Application** • [Link](#)

- Built a full-stack blog app using **React (Frontend)** and **Flask with SQLAlchemy (Backend)** for user-generated content.
- Added **JWT authentication** for secure login/registration and **CRUD operations** for posts/comments.
- Designed a responsive UI with **React Router** and **dark/light mode toggle**. Used **Formik** for form validation and **Flask RESTful** for optimized API performance.
- **Technologies:** React, Flask, SQLAlchemy, JWT, Formik, REST API, CSS
- **Key achievements:** Developed a full-stack blog platform with React and Flask, featuring JWT authentication, CRUD operations, responsive UI, and scalable RESTful APIs.

**Recipe Application** • [Link](#)

- Built a **React-based** web app fetching recipes from an API, allowing users to search, save, and filter recipes.
- Enabled local data persistence using **JSON Server** for saving favorite recipes.
- Designed a responsive UI with **HTML, CSS, React components** and deployed using **Render**.
- **Key Achievement:** Demonstrated proficiency in **API integration** and **state management** using React.
- **Technologies Used:** React, JavaScript, HTML, CSS, JSON Server, TheMealDB API, Render.