

# Ian Odhiambo

Nairobi, Kenya

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## Skills

**Proficient:** C/C++, Python, JavaScript, Docker, Kubernetes, AWS, SQL, Ansible, CloudFormation

**Moderate:** Go, Julia, Rust, MATLAB, GCP, Azure

## Work Experience

### Freelance Software Engineer

Turing, *remote*

Jan. 2023 – May 2024

- Collaborated closely with cross-functional teams to understand requirements and translate them into robust backend solutions, delivering projects on time and within budget.
- Implemented security best practices, including encryption protocols, input validation, and access controls, to safeguard sensitive data and protect against potential cyber threats.
- Provided maintenance and support for backend systems, troubleshooting issues, and implementing enhancements to address evolving business needs and technological advancements.
- Optimized database queries and schema designs for improved data retrieval and storage efficiency, reducing query times and enhancing overall system performance.

## Projects

### Privacy Management Tools [github.com/dr8co/PrivacyShield](https://github.com/dr8co/PrivacyShield)

- Designed and implemented a password manager, a file encryption utility, a file shredder, a browser cookie cleaner, and a file deduplication utility for UNIX systems.
- Ensured data confidentiality by employing robust encryption algorithms including AES, Serpent, Twofish, and Camellia.
- Incorporated both the 3-pass and the 7-pass DOD 5220.22-M shredding algorithms, along with shredding with random bytes to safely discard data.
- **Utilized:** C++, CMake, Bash scripting, OpenSSL, Gcrypt, Sodium, and Blake3.

### Full-Stack Airbnb Clone [github.com/dr8co/AirBnB\\_clone\\_v4](https://github.com/dr8co/AirBnB_clone_v4)

- Collaborated in the design and implementation of a storage system to give an abstraction between objects and how they are stored and persisted.
- Designed and developed RESTful APIs, facilitating seamless communication between the frontend and backend components.
- Integrated SQLAlchemy ORM to establish a robust database schema, enabling efficient storage and retrieval of property listings, user profiles, and booking information.
- **Utilized:** Python, Flask, JavaScript, MySQL, HTML, CSS, and Bash scripting.

### Linux In-Memory Data Structure Store [github.com/dr8co/Cachetron](https://github.com/dr8co/Cachetron)

- Developed Cachetron, an in-memory data structure store for Linux, offering developers with a lightweight caching solution for high-performance applications.
- Implemented TCP socket-based client-server architecture for efficient communication between clients and cache server, ensuring seamless integration into diverse application ecosystems.
- Engineered the key-value store functionality, enabling efficient storage and retrieval of data structures, optimizing data access and manipulation for enhanced application performance.
- **Utilized:** C, C++, CMake, and Python.
- You can find more projects and information in my online portfolio at <https://iandee.tech>

## Education

**Software Engineering**, Holberton School

Aug. 2022 – Oct. 2023

**DevOps Engineer Nanodegree**, Udacity

Nov. 2022 – Mar. 2023

**BSc. Mechanical Engineering**, University of Nairobi

Sept. 2017 – Dec. 2022