

## Jean de Dieu UWINTWALI

Kigali - Rwanda | uwintwali.umd@gmail.com | +250790524877 | Github | LinkedIn | Blogs | DataCamp

### EDUCATION

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**University of Rwanda, CST** | *Bachelor of Computer and Software Engineering*

**Kigali, Rwanda** | *May 2022 – June 2026*

- Currently, in final year, completing coursework in software development, computer hardware, networks, data structures, and algorithms.
- Studying artificial intelligence and IoT concepts through assigned coursework and independent research projects.
- Working on academic projects that involve practical solutions to technical problems, including group assignments and individual coding tasks.
- Developing technical skills through lab work, coding assignments, and collaborating with classmates on programming projects.
- Maintaining strong academic performance while learning current technologies and programming languages used in the industry.

**Blossom Academy** | *Data Science Program*

**Kigali, Rwanda** | *Aug 2025 – Feb 2026*

- Cleaning datasets to find meaningful patterns and create visualizations
- Building machine learning models to predict customer behavior and forecast sales
- Writing SQL queries to extract and analyze data from multiple sources
- Conducting A/B tests to measure the impact of product and marketing changes
- Communicating technical data findings to non-technical audiences

**ES Nyarutovu** | *High School Diploma*

**Gakenke, Rwanda** | *Jan 2018 - Jul 2021*

- Studied Mathematics, Computer Science, and Economics
- First Division, Score: 73/73
- Media Club President (2019–2021): Led the club's multimedia initiatives, promoting integrity, creativity, and student engagement through journalism, photography, videography, and digital storytelling.

SKILLS

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Programming Languages	C, C++, Python, SQL, JavaScript, Java, dart, flutter, HTML/CSS
Frameworks	Django, React, Next.js
Backed Development	Node, Express, REST APIs
Databases	PostgreSQL, Mysql, MongoDB
Tools	Power BI, Git, Github, Postman, Docker, Firebase
IoT & Embedded Systems	Arduino, ESP32, LoRaWAN, Sensor Integration, Real-Time Data Monitoring
Soft Skills	<ul style="list-style-type: none"><li>Strong Communication skills</li><li>Team Collaboration</li><li>Time Management</li><li>Critical Thinking &amp; Problem-Solving</li></ul>

EXPERIENCE

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Ministry of Justice   <i>Software Developer Intern</i>	Gasobo, Kigali   <i>March 24 – May 23, 2025</i>
<ul style="list-style-type: none"><li>Collaborated with the software development team to enhance the Universal Periodic Review System, Rwanda’s tool for tracking UN human rights commitments across institutions and track progress toward strategic goals.</li><li>Assisted in debugging and maintaining user permission modules, ensuring secure and accurate role-based access for all system users.</li><li>Provided IT support to Ministry staff, including troubleshooting software issues, assisting with network configuration, and ensuring optimal digital work environments.</li><li>Gained hands-on experience in government-level system architecture, collaborative development, and inter-institutional data workflows.</li></ul>	

LANGUAGES

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Kinyarwanda	Native
English	Fluent

HOBBIES AND INTERESTS

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- Blog writing
- Reading
- Fitness and well-being
- Traveling

## QUALITIES

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- Teamwork
- Creativity
- Time Management
- Ethical Awareness
- Perseverance & Patience
- Adaptability & Curiosity

## CERTIFICATIONS

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### AI Engineer for Developers Associate

DataCamp

*October 2025*

[View](#)

### Data Scientist

Blossom Academy, DataCamp

Anticipated certification *Feb 2026*

## PROFESSIONAL DEVELOPMENT

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### Software Development Certificate

PowerLearnProject

Nov 2024

[View](#)

### IoT Certification Course

FabLab

Jun 2024

[View](#)

### Introduction to Power BI

Data Camp

Oct 2025

[View](#)

### Joining Data in SQL

DataCamp

Aug 2025

[View](#)

### Prompt Engineering with the OpenAI API

DataCamp

Aug 2025

[View](#)

### Working with Hugging Face

DataCamp

Aug 2025

[View](#)

### Introduction to AI Agents

DataCamp

Aug 2025

[View](#)

### Developing AI Systems with the OpenAI API

DataCamp

Aug 2025

[View](#)

### Developing LLM Applications with LangChain

DataCamp

Aug 2025

[View](#)

## PROJECTS

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### **Customer Support Automation System** | *Python, OpenAI API, NLP, Scikit-learn, FastAPI*

- Created a chatbot that sorts customer questions using semantic similarity search with OpenAI embeddings, reaching 83% accuracy when matching responses to predefined answers.
- Designed a response system using TF-IDF vectorization and cosine similarity to match questions efficiently, with GPT-3.5-turbo handling questions that don't match existing responses.
- Set up batch processing with exponential backoff retry logic for OpenAI API calls, processing 500+ documents while keeping the system running fully through rate limit restrictions.
- Put together complete conversation tracking with structured JSON logging, time records, and confidence scores to maintain records and support ongoing system refinements.

### **Medical Transcription & ICD-10 Coding System** | *Python, OpenAI API, NLP, Pandas*

- Built a system using GPT-3.5-turbo to convert medical transcripts into structured JSON data, extracting diagnoses, treatments, and patient information.
- Created an ICD-10 coding engine that automatically assigns medical billing codes to diagnoses for insurance claims processing.
- Developed batch processing with error handling to transform hundreds of medical records into a structured database for analysis.

### **HomelyHub: Apartment & Hotel Booking Platform** | *React, Node.js, MongoDB, Express*

- Built a web app for searching and filtering apartments/hotels by location, amenities, and availability dates.
- Created backend services with Node.js and Express for booking management, user login, and data storage using MongoDB.
- Developed responsive frontend with React for browsing properties, viewing details, and making reservations.

### **Smart Mattress with IoT & AI for Healthcare** | *Next.js, PHP, PostgreSQL, Tailwind CSS*

- Creating an IoT system with sensors to monitor posture, breathing, and heart rate in real-time.
- Building automatic mattress adjustment and caregiver alerts based on sensor data analysis.
- Developed a dashboard displaying sleep quality and recovery metrics for users and medical staff.

### **Ishema-Connect: Community Volunteer Platform** | *Django, Python, SQLite, HTML/CSS*

- Built a web platform for non-profits to post volunteer events and manage sign-ups.
- Created features for event management, tracking volunteer hours, and generating impact reports.
- Developed a Django backend to handle users, events, and partnerships to connect volunteers with organizations.

### **Mochi: AI Companion App** | *Flutter, PostgreSQL, NLP*

- Building a mobile app with Flutter that creates personalized conversations by using user profiles, moods, and interests.

- Developing an AI system that learns from conversations and provides appropriate emotional support based on user interactions.
- Developed a PostgreSQL database to store user information, conversation history, and preferences for a personalized experience.

## REFERENCES

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**Mr. Dieudonné UKURIKIYEYU**

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I confirm that the information provided is accurate and true to the best of my knowledge.

Kigali, Oct 20, 2025

A handwritten signature in black ink, consisting of a stylized 'J' followed by a horizontal line.