

JEAN CLAUDE HIRWA

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SUMMARY

Software Engineer with over 5 years of experience and AI expertise, specializing in system architecture, cloud computing, machine learning, and data science. Proven track record in designing scalable applications, such as payment systems and enterprise tools. Skilled in full-stack and mobile development, database management, AI integration, and performance optimization. Passionate about leveraging AI and technology for efficient, innovative, impactful software.

EDUCATION

Master of Science in Engineering AI

August 2024 - May 2026

Carnegie Mellon University, Africa

Specializations: Machine Learning, Data science

Bachelor of Science in Computer Engineering

November 2019 - October 2024

University of Rwanda, Rwanda

Specializations: Software Engineering

PROFESSIONAL EXPERIENCE

Senior Software Engineer

December 2023 - September 2024

ITEC Ltd, Rwanda

- Architected, and Led development of a payment processing system, ITECPAY, delivering it one month early.
- Optimized a high-performance payment processing system handling over 500,000 transactions daily, increasing scalability, reliability, and technical efficiency.
- Mentored junior developers, increasing team productivity by 15%.
- Boosted system performance by implementing caching and optimizing algorithms, cutting response time by 30% and enabling scalability for 2,000+ concurrent users.
- Enhanced vehicle plate number identification accuracy by 10% leveraging machine learning.

Software Developer

April 2023 - December 2023

ITEC Ltd, Rwanda

- Co-developed STUMIS, a comprehensive school and university management system with robust features, now used by five schools and universities in Rwanda.
- Enhanced system efficiency by 5% through codebase optimization.
- Integrated third-party APIs to boost application functionality, resulting in a 20% increase in user engagement.

Software Developer (Intern)

January 2023 - April 2023

ITEC Ltd, Rwanda

- Co-developed a Restaurant Management System, enhancing business operations, now used by over seven restaurants in Kigali.
- Collaborated with senior developers to debug and refine core management applications, reducing latency by 5%.
- Gained proficiency in optimizing code and improving software efficiency.

PROJECT WORK

AI-Powered Ophthalmology Image analysis

January 2023 - December 2024

- Tools & software: TensorFlow, PyTorch, Express.
- Developed and fine-tuned a deep learning model for accurate classification of ophthalmology images, achieving a 89% accuracy.
- Optimized model performance by reducing training time and improving inference speed by 30% using TensorFlow and PyTorch.

Vehicle Plate number Identification

January 2023 - December 2024

- Tools & software: Python, Scikit-learn, TensorFlow.
- Developed and trained a machine learning model improving vehicle plate number identification accuracy by 10%.

SKILLS

- Programming Languages: Python (Advanced), PHP (Advanced), Java (Advanced), JavaScript (Advanced).
- Mobile development: Flutter (Advanced), React native (Intermediate)
- Machine Learning & AI: TensorFlow (Advanced), PyTorch (Intermediate), Scikit-learn (Advanced), Keras (Advanced).
- Data Analysis: Pandas (Advanced), NumPy (Advanced), Matplotlib (Advanced), Seaborn (Advanced).
- Web Development: Node.js, React.js, Express.js, REST APIs.
- Cloud & Networking: AWS (Intermediate), Microsoft Azure (Intermediate), Docker (Intermediate).
- Language: English (Fluent), French (Basic Proficiency), Kinyarwanda (Native).
- Other Skills: Problem-solving, Leadership, Team Collaboration, Project Management.

CERTIFICATIONS

- Deep Learning Specialization - Coursera (by Andrew Ng, DeepLearning.AI) | 2024.
- Certified TensorFlow Developer - TensorFlow Certificate Program | 2024.
- Complete TensorFlow 2 and Keras Deep Learning Bootcamp - Udemy | 2023.
- The Complete Node.js Developer Course (3rd Edition) - Udemy | 2023.
- Graduate Bridge Program - Carnegie Mellon University Africa | 2023.
- AI-Powered Next Generation Entrepreneurship Training - UNESCO | 2023.

INTERESTS & ACHIEVEMENTS

- Volunteered as a mentor at a local coding bootcamp, empowering youth in programming and technology.
- Led a student tech group, organizing workshops and networking events with industry professionals, fostering collaboration, and enhancing technical skills.
- Led a final year project and achieved 1st place in computer engineering department with a 90% score, demonstrating exceptional teamwork and innovation.
- Recognized on the Principal's Roll of Honour (University of Rwanda, 2023) for outstanding academic excellence.
- Achieved second place in the AI-Powered Next Generation Entrepreneurship Training in Rwanda (UNESCO, 2023), showcasing innovation in AI-driven solutions.