

UWIRAGIYE BEATHA Portfolio

Personal Information

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Overview

- **Years of Experience:** 2 years and 5 months
 - **Age:** 31 years old
 - **Current Employment Status:** Seeking new opportunities
 - **Expected Salary:** According to company regulations
 - **Jobs and R&D Research Interest Areas:**
 - User Perception and Behavior in Buildings
 - Renewable Energy in Buildings
 - Deep Learning for Building Energy Controls and Robotics
 - Fraud Detection and Prevention
 - Financial Forecasting and Analysis
 - Autonomous Vehicles (Self-Driving Cars)
 - Smart Appliances and Energy Management
 - Customer Sentiment Analysis
 - Climate Modeling and Prediction
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Education

- **Degree:** Master's in Engineering (ML & Artificial Intelligence)
- **Institution:** Kyung Hee University Graduate School
- **Duration:** September 2021 - August 2023

Professional Experience

1. IT Support Staff

- **Tenure:** August 2018 - December 2020
- **Organization:** National Institute of Statistics of Rwanda (NISR), Kigali, Rwanda
- **Key Responsibilities:**
 - Development and testing of electronic survey data collection applications.
 - Key role in questionnaire design and data quality management.
 - Provided comprehensive support and training on CsPRO software to field staff and interns.

2. Researcher in R&D

- **Organization:** ChungAng University
- **Tenure:** September 2023 - January 2024 (5 months)
- **Project:** Green Button Project
- **Key Responsibilities:**
 - **Data Preparation and Cleaning:**
 - Downloaded and organized data from Korean websites.
 - Implemented cleaning routines to ensure data quality.
 - Utilized data transformation tools for optimal analytical processes.
 - **Data Analysis:**
 - Conducted analyses to identify trends and insights.
 - Used statistical tools for decision-making support.
 - Collaborated with data scientists to refine models and reports.
 - **REST API Development:**
 - Designed, developed, and maintained RESTful APIs for seamless data exchange.

- Ensured APIs are secure, scalable, and well-documented.
- **Web Application Development:**
 - Developed user-friendly web applications.
 - Integrated front-end technologies with back-end systems.

3. Researcher in R&D

- **Organization:** Kyung Hee University
- **Tenure:** September 2021 - August 2023 (2 years)
- **Focus Areas:** Specialized in machine learning, including reinforcement learning and deep learning.
- **Notable Research Projects:**
 - **Real-Time Estimation Model Predictive Control System:**
 - Optimized building energy use and control.
 - Developed regression and tree-based models.
 - Conducted statistical analyses and created machine learning models.
 - Wrote REST APIs and designed user-friendly web-based dashboards.
 - **Integrated ESS and PV Optimal Control Algorithm:**
 - Developed a web-based application to estimate electricity generation from solar photovoltaics (PV).
 - Designed user forms for input, produced results via integrated Excel sheets, and displayed results on a web page.

Technical Skills

- **Machine Learning & AI:**
 - CNN, RNN, LSTM, Decision Trees, Generative Adversarial Networks (GANs), Reinforcement Learning, Natural Language Processing (NLP), Computer Vision.
- **Data Science Tools:**
 - Pandas, NumPy, Flask, Streamlit, OpenCV, Deep Q-Networks (DQN), Scikit-Learn,

PyTorch, Fine-Tuning, HTML, CSS, JavaScript.

- **Databases:**
 - SQL, MySQL, SQLAlchemy, MongoDB.
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Soft Skills

- **Teamwork:** I thrive in collaborative settings, working effectively as part of a diverse team to achieve common goals.
 - **Communication:** I excel in clear and concise communication, both written and verbal.
 - **Problem-Solving:** I approach challenges with a solution-oriented mindset, analyzing situations critically and creatively to develop effective strategies.
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Projects & Contributions

- Applying AI and machine learning in architectural engineering to optimize energy use.
 - Executed
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Certificates

- Machine Learning, Data Science and Generative AI Certificate
 - TensorFlow 2.0 Certificate
 - DEAfrica-Certificate-of-Completion
 - Spatial Data Science_ The New Frontier in Analytics_Certificate
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Closing statement

Thank you for taking the time to explore my portfolio. I appreciate your interest in my work and qualifications. I am always eager to connect with fellow professionals and discuss potential opportunities for collaboration or to share insights in our field. Please feel free to reach out to me if you have any questions or would like to arrange a conversation. I look forward to the possibility of connecting and exploring how we can work together.

