

SILVER RUBANZA

Machine Learning Engineer & Software Developer

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PROFILE

Machine learning engineer and software developer.

I have over 5 years experience doing machine learning work across freelance projects, Kaggle competitions, and end-to-end personal projects, with a portfolio of deployed systems spanning tabular modelling, computer vision, generative AI (including healthcare LLMs), and collaborative filtering.

Furthermore, I have over 9 years experience building web applications using modern JavaScript frameworks. Practical project examples at silverrubanza.com.

WORK EXPERIENCE

Freelance Machine Learning Engineer

2019 – Present

Independent & freelance clients

- Built multiple end-to-end ML projects across tabular modelling, computer vision, generative AI, and collaborative filtering.
- Competed in multiple Kaggle competitions covering classification, regression, and computer vision tasks, achieving top 5% rankings.
- Delivered end-to-end data projects covering collection, transformation, and analysis of ERP sales data for multiple retail clients.
- Built dashboards to surface sales drivers, growth rates, and marketing focus areas for stakeholder review.
- Built models to support demand forecasting, with the goal of reducing stockouts and capital tied up in non-moving stock.

Software Developer

June 2017 – March 2026

Zigoti Coffee Works Limited, Kampala, Uganda

- Rebuilt zicofe.com from WordPress to a ReactJS application, achieving a 1.4s Speed Index.
- Re-established the company's online presence (no active website or Google Business profile in place at time of joining), driving 1,000+ monthly profile views and 100+ monthly customer interactions, generating recurring inbound business leads that have translated into direct coffee export sales.
- Reported website performance metrics to business stakeholders via structured reports and presentations to inform marketing decisions.
- Also handled social media management and contributed to on-the-ground sales and marketing efforts to grow the customer base.

PROJECTS

AI Medical Assistant on Uganda Clinical Guidelines (*ongoing*)

[work in progress](#)

Working on an AI system for assisted differential diagnosis based on the Uganda Clinical Guidelines, using FSDP-QDoRA for efficient fine-tuning of a medical LLM.

Python, PyTorch, fastai, LLMs, FSDP-QDoRA

Stable Diffusion from the Foundations

[live demo](#)

A complete implementation of Stable Diffusion built up from first principles, covering the diffusion process end-to-end to develop a working understanding of diffusion-based image generation.

Python, PyTorch, Stable Diffusion, Generative AI

End-to-End Sales Forecasting Deployment with Modal

[live demo](#)

Full-stack ML deployment of a sticker sales forecasting model: Airbyte ELT pipeline (Google Sheets to AWS S3), XGBoost training on Modal's serverless cloud, batch prediction API served via Modal endpoints, and a Streamlit dashboard for stakeholder visualization.

Python, Modal, fastai, XGBoost, Airbyte, AWS S3, Streamlit, MLOps

ML Model Deployment with BentoML

[live demo](#)

Production deployment workflow for a binary classification model, packaged and served as a REST API using BentoML and BentoCloud.

Python, BentoML, BentoCloud, fastai, MLOps

Suwik Investments E-commerce

[github](#)

A React-based e-commerce site for an agricultural export startup, built to improve online visibility and generate direct leads and business sales, with analytics tracking configured for KPIs to help management assess target progress.

React, JavaScript, HTML, CSS, Analytics

EDUCATION

Bachelor's Degree in Software Engineering

September 2016 – July 2020

Wuhan University, Wuhan, China

- Core modules: Data Structures, Algorithms, Web Development, Software Testing, Ethics, and Artificial Intelligence fundamentals.

COURSES & PROFESSIONAL DEVELOPMENT

Practical Deep Learning for Coders

2022

[fast.ai](#)

Deep learning course covering fundamentals and practical applications for computer vision, NLP, tabular modelling, collaborative filtering using PyTorch and the fastai library, plus understanding and implementing generative models from scratch.

How to Solve It with Code

2025 – Present

Answer.AI (Jeremy Howard & Eric Ries)

A broad problem-solving course covering classic data structures and algorithms (including Advent of Code puzzles), functional programming, accelerated computing with NumPy and PyTorch, graph algorithms, web development with FastHTML and HTMX, web APIs, web scraping, system administration and devops, long-form writing and reading academic papers, developing the practical skills to independently build and ship complete software products. Startup building sessions led by Eric Ries.

Exploratory Data Analysis with Python

January – February 2023

Codecademy

SKILLS

Machine Learning & AI: Python, PyTorch, fastai, XGBoost / CatBoost / LightGBM, scikit-learn, NumPy, Pandas, Generative AI (Stable Diffusion, LLMs), etc.

ML Deployment: Modal, BentoML, Hugging Face, etc.

Web Development: ReactJS, Next.js, HTML, CSS, JavaScript, FastHTML, HTMX, etc.

Cloud & Infrastructure: AWS, GCP, etc.

LANGUAGES

- English (Fluent)
- Chinese (Conversational)