

HRIDAYA GIRI

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SUMMARY

L1 Software Engineer (AI/ML) at VivaSoft Nepal with experience in leading software development for AI-driven platforms, including voice agents, memory-management chat systems, and real-time analytics dashboards. Skilled in Python, FastAPI, LLMs, graph databases, and cloud deployment. Passionate about building practical AI/ML solutions, optimizing real-time systems, and contributing to innovative, collaborative AI projects. Passionate about simplifying complex ideas, building practical ML solutions. Curious, collaborative, and eager to grow in a collaborative and fast-paced AI projects and environment.

EDUCATION

BSc(Hons) Computing with Artificial Intelligence

Islington College
London Metropolitan University
Kamal Marg, Kamalpokhari, Kathmandu

Nov 2022- Dec 2025

SLC

WhiteHouse International College
National Examination Board (NEB)
Tinkune, Kathmandu

April 2020 - May 2022

SEE

Galaxy Public School
National Examination Board (NEB)
Gyaneshwor, Kathmandu

2008- 2020

WORK EXPERIENCE

L1 Software Engineer (AI/ML), Vivasoft Nepal – Kathmandu

Dec 2025 – present

- Working on an end-to-end AI agent and analytics platform for call-center automation.
- Building real-time voice AI solutions covering orchestration, AI processing, and admin control.
- Developing AI-powered voice agents to automate customer interactions at scale.
- Contributing to AI-driven analytics for call insights, monitoring, and operational intelligence.
- Handling deployment and infrastructure, including server setup, web servers, firewalls, and proxies.
- Supporting scalable production systems for concurrent AI-driven calls.

Associate AI/ML Engineer, Vivasoft Nepal – Kathmandu

July 2025 – Dec 2025

- Worked on a memory-management conversational AI chat system with a real-time voice agent
- Designed and developed voice-based AI interactions using integrated STT + TTS pipelines with contextual memory handling with RAG.
- Fine-tuned Speech-to-Text (STT) and Text-to-Speech (TTS) models for real-time voice agents
- Experience with Piper TTS and custom voice dataset training
- Implemented VAD (Voice Activity Detection), interruption handling, noise cancellation, and speaker Diarization for natural real-time conversations
- Experience with platforms like LiveKit for low-latency voice communication
- Researched and contributed to AI Interview Core System (R&D) to enable human-like AI-driven interviews.
- Deployed AI systems and platforms on AWS and GCP, managing end-to-end deployment from model training to production
- Worked with real-time communication networking components including STUN, TURN, and ICE
- Conducted load testing, stress testing, and concurrent user testing on cloud platforms
- Implemented system monitoring, performance tracking, and reliability checks for deployed services

Java Developer Intern, Tanvi Technology-Kathmandu

Sept 2024 - Dec 2024

Project: YatraSewa – Online Bus Ticket Booking System

- Built a full-stack web application using Java Servlets and JSP.
- Enabled ticket booking for users, bus management for agents, and platform control for admins.
- Followed MVC architecture, integrated sessions, form validations, and database connectivity.

TECHNICAL SKILLS

- Programming Languages: Python, Java, JavaScript, Golang
- Libraries & Tools: Pandas, NumPy, Scikit-learn, Matplotlib, PySpark, OpenCV, Transformers (Hugging Face), FastRTC, NetworkX
- Frameworks & Platforms: FastAPI, Django, LangChain, TensorFlow, PyTorch
- Databases & Search: Neo4j, Qdrant, MySQL, Oracle, SQL Server, Cloud SQL
- Data Integration & ETL: SSIS, SSAS, Redis, RabbitMQ
- Voice & Real-Time Systems: PJSIP, Asterisk, WebSockets, Gemini live native API
- Deployment, Containerization & Cloud: AWS, GCP, NGINX, Docker, Prometheus, Grafana
- Development Tools & IDEs: VS Code, PyCharm, Jupyter Notebook, IntelliJ IDEA, Eclipse, Visual Studio, Taiga
- Operating Systems: Windows, macOS, Linux

SOFT SKILLS

- Communication
- Teamwork & Collaboration
- Time Management & Prioritization
- Adaptability
- Problem Solving & Decision Making
- Analytical Thinking

PROJECTS

VivaDai — Memory Management Chat System & Voice Agent

Technologies: Python, FastAPI, FastRTC, Gemini API, Neo4j, Qdrant, AWS

- Designed and developed a memory-management AI chat system with a real-time voice agent.
- Integrated RAG + Neo4j for knowledge retrieval and Qdrant for NoSQL storage to maintain context and team updates.
- Built features for conflict detection, query expansion, and task notifications to keep team members informed.
- Enabled contextual and adaptive memory management, allowing the agent to update, retrieve, and provide information dynamically.
- Deployed system on AWS, ensuring reliability and scalability for real-time collaboration.

Novara Interview Engine — Core R&D

Technologies: Python, NetworkX, Gemini API

- Built an AI-driven interview engine combining LLM + graph + database for candidate assessment.
- Designed adaptive, cost-efficient interviews with dynamic flows based on candidate performance.
- Implemented ranking and selection algorithms for top candidates.

Aakashwani & Dogmatix — AI voice agent incoming/outgoing Platform

Technologies: Python, FastAPI, PJSIP, Asterisk, Redis, RabbitMQ, WebSockets, Gemini API

- Developed an AI-powered voice calling platform for inbound/outbound calls.
- Built middleware connecting Asterisk PBX with Gemini live API for real-time voice interactions.
- Integrated PJSIP + WebSockets for audio streaming and real-time conversational AI.

Kothon Analytics Dashboard — End-to-End AI Voice Agent & Analytics Platform

Technologies: Taiga, Google Cloud Platform (GCP), Golang, Python, Gemini api, prometheus, grafana

- Developed a cloud-hosted AI voice agent and analytics platform with backend services and server management.
- Implemented real-time monitoring and observability using Prometheus and Grafana.
- Delivered a scalable, production-ready system providing actionable insights from AI-driven voice interactions.
- Built features to track churn risk and customer engagement for telecom operations.

BookMentorAI - A RAG based chatbot for Book-Based Question Answering

Technologies: Python, Transformers, BM25, Vector Search, Cross-Encoder, LLaMA 3.2, Ollama API

- Developed a hybrid retriever combining BM25 and vector embeddings with cross-encoder reranking for precise document retrieval.
- Integrated LLaMA 3.2 for retrieval-augmented generation with context-aware prompting to deliver accurate, detailed answers.
- Managed conversational history for multi-turn question reformulation and enhanced user interaction.

LINK: <https://github.com/GiriHridaya319/BookMentorAI-RAG-CHATBOT.git>

Multi-Class Garbage Classification using ResNet50

Language used: Python

Tech Stack: PyTorch, OpenCV, ResNet50

- Fine-tuned ResNet50 model to classify images into 12 garbage categories.
- Built a FastAPI backend allowing users to upload images for real-time classification.
- Deployed the application using Docker containers for easy scalability and portability.
- Used OpenCV for image preprocessing.

LINK: <https://github.com/GiriHridaya319/Multi-Class-Garbage-Classification-using-Finetuned-ResNet50.git>

KnowYourHair – Hair Loss Risk Prediction and Prevention Web Application

Tech Stack : Python (Django), Scikit-learn, Pandas, NumPy, HTML/CSS/JavaScript

- Developed an AI-powered web app predicting hair loss risk using Random Forest Regressor and Classifier models.
- Implemented a hybrid-based product recommendation system to suggest personalized hair care products to users.
- Built features for booking dermatologist appointments and managing clinics using Django framework.
- Provides personalized risk assessment, prevention tips, and product purchase options.

LINK: <https://github.com/GiriHridaya319/KnowYourHair.git>

Taxi Trip Data Analytics

Tech Stack: SSIS, SSMS, SSAS, Power BI, SQL

- Built an end-to-end ETL pipeline using SSIS to clean and transform taxi trip data.
- Modeled data in star schema and developed SSAS cubes for multidimensional analysis.
- Created Power BI dashboards showing peak hours, revenue zones, and trends.

YourCricMentor - Cricket Enthusiast Evaluation System

Language used: HTML, CSS, JavaScript, Java

Developed 'YourCricMentor,' a web application using Java EE and MySQL, to manage cricket test details and player results. It facilitates player registration, coach evaluations, and academy partnerships, supporting cricket enthusiasts in Nepal by enhancing their skills and connecting them with top academies.

LINK: <https://github.com/GiriHridaya319/Web-application-YourCricMentor-JEE-Framework.git>

Nepali Housing Price Prediction

Tech Stack: Python, Pandas, Random Forest, Linear Regression, Streamlit

- Cleaned and analyzed a Nepali housing dataset. Built machine learning models (Random Forest and Linear Regression) to predict house prices.
- Developed a user-friendly Streamlit web application for real-time predictions.

Link: <https://github.com/GiriHridaya319/Nepali-House-Price-Prediction/tree/main>

ACHIVEMENT AND CERTIFICATIONS

Triple AAA Scholarship Recipient – Islington College

Awarded for outstanding performance in Academics, Attendance, and Attitude. One of 144 students selected for a 100% tuition waiver, recognizing academic excellence, discipline, and active participation in college life.

Learning Cloud Computing: Core Concepts

LINK: <https://www.linkedin.com/learning/certificates/fbd9f792a2b34f6a7c5140a7576c8c595ce9534378d05dc3319fa2fdc542463f>

Won the National 'Khelnagari Cricket Tournament' under my leadership