

Srijan Basnet

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EDUCATION

Prithivi Narayan Campus

Bachelor of Science in Computer Science and Information Technology

Pokhara, Nepal

April 2022 – April 2026

EXPERIENCE

AI and Automation Engineer

December 2024 – Present

Chicago, Illinois

Ashray Tech

- * Engineered a voice-interactive RAG system incorporating advanced speech recognition (STT) and speech synthesis (TTS) to provide accurate, context-aware responses to user inquiries.
- * Developed an automated workflow for ingesting and posting patient notes into the electronic medical record (EMR), reducing manual data entry and improving accuracy.
- * Researched and implemented content-driven quantitative and qualitative metrics to assess the quality and completeness of clinical notes through detailed analysis.

PROJECTS

Second Opinion | Python, PyTorch, Fast API, React, PostgreSQL

- * Developed an AI-powered medical image analysis platform leveraging **Vision Transformers (ViT)** and **transfer learning** to support multi-condition detection for brain tumors.
- * Used transfer learning to optimize vision transfer (ViT) based models achieving **96.89% test accuracy** on MRI-based brain tumor classification, with automated image-type verification for preprocessing reliability.
- * Implemented secure user management with OTP-based email verification, encrypted authentication, and a full dashboard for viewing predictions, histories, and probability breakdowns.
- * Built PDF-report generation and a seamless end-to-end workflow for image upload, inference, results visualization, and shareable medical summaries for clinical consultation.

E-Nirikshan | Python, React Native, Node.js, ChromaDB

- * Developed a multi-service transparency platform for government procurement system.
- * Built the citizen-facing mobile app enabling project browsing, real-time tracking, and submission of geo-tagged photographic reports with multilingual support.
- * Implemented an AI assistant using a Retrieval-Augmented Generation architecture with ChromaDB and OpenAI, including **multilingual voice interaction via Speech-to-Text (STT)**.
- * Created secure, scalable API services and end-to-end infrastructure for data ingestion, analytics dashboards, and seamless communication between backend, mobile, and RAG systems.

WordLens AI | Flutter/Dart

- * Developed an on-device AI image-search system using **Google ML Kit OCR**, enabling fast, fully offline text extraction across user galleries and powering an app with **5,000+ Google Play downloads**.
- * Engineered an optimized background pipeline to scan, recognize, and index text from thousands of images, using **sqlite** caching to deliver high-performance, ML-driven retrieval at scale.
- * Implemented advanced multi-keyword and date-based search on top of OCR-derived features while ensuring complete privacy by performing all AI inference locally on the device.

TECHNICAL SKILLS

Languages: Python, Flutter/Dart, Java, C/C++, SQL, JavaScript, HTML/CSS, R

Frameworks: PyTorch, Selenium, React, Flask, FastAPI, Django

Developer Tools: Git, Docker, Google Cloud Platform, Kubernetes

Libraries: Pandas, NumPy, Matplotlib

CERTIFICATIONS

CITI Data and Specimen Research

CITI Conflict of Interest

HIPAA Certification