Prakshal Bhandari

Portfolio | (+1)343-598-7418 | pbhan073@uottawa.ca | LinkedIn | GitHub

EDUCATION

University of Ottawa   Ottawa, ON
Master of Engineering, Electrical and Computer Engineering   *Sep. 2024 – May 2026*

Charusat University   Gujarat, India
Bachelor of Technology, Computer Science (CGPA: 9.53/10)   *Aug. 2020 – May 2024*

TECHNICAL SKILLS

Languages: Python, JavaScript, SQL, HTML, CSS, C, C++, R, PHP
Technologies/Frameworks: TensorFlow, Keras, Numpy, Pandas, Streamlit, Large Language Models (LLMs), Retrieval-Augmented Generation (RAG), Natural Language Processing(NLP), Node.js, React.js, Express.js, Socket.io
Database: MongoDb, MySQL, PostgreSQL
Tools: Power BI, Git, Postman, Docker, AWS, Robotic Process Automation, VMware, Apache Spark, Excel, Linux

EXPERIENCE

AI/ML Developer   Dec 2023 - April 2024
Dhyey Technologies (OPC) PVT. LTD. DBA TechXi   *Gujarat, India*
- Developed a dynamic **deep learning model** for bird species classification, deployed using Streamlit, enabling **92% accuracy** in identification.
- Utilized **Robotic Process Automation (RPA)** to automate the retrieval and description of bird species data, cutting manual processing time by 40%.
- Created a **Hand gesture-controlled presentation** system with **Python, OpenCV, and MediaPipe**, providing a hands-free alternative for individuals with mobility impairments.

Machine Learning Developer   May 2023 - July 2023
Raven Technolabs   *Gujarat, India*
- Performed web scraping to gather customer reviews from websites like Flipkart and Blinkit for sentiment analysis using **Natural Language Processing (NLP)**.
- Achieved **88% accuracy** in model predictions, providing actionable insights for **10K+ reviews** and helping businesses enhance customer satisfaction.

Python Developer   May 2022 - July 2022
Sparks To Ideas   *Gujarat, India*
- Developed a full-featured website using **Django**, implementing user authentication, database management, and responsive design, which improved user engagement by **30%.**
- Conducted **data analysis** on large datasets using **Python, Pandas, Excel, and Power BI**, uncovering trends and insights that improved operational efficiency by **25%** and accuracy by **15%**.

PROJECTS

Lip Reading Model | *Sequential Neural Network, Streamlit Framework, Python* | GitHub
- Developed lip reading model using **machine learning** and computer vision to interpret spoken words from video.
- Built with **Streamlit**, providing an interactive and user-friendly interface for real-time predictions.
- Enabled users to upload videos for lip movement analysis, achieving **90% accuracy** in word recognition.

RAG Chatbot | *Python, JavaScript, Flask, ReactJS, PyMuPDF, Pinecone, OpenAI API, LangChain* | GitHub
- Developed a RAG-based chatbot for seamless integration with an **e-hospital platform**, enhancing response accuracy by **30%** through reliable, trusted medical data sources.
- Processed over **500+ pages of medical data**, enabling **real-time** symptom analysis and disease suggestions.

PUBLICATIONS

A novel system for Brain Tumor Detection and Localization | Link
IEEE Transactions on Pattern Analysis and Machine Intelligence
- Conducted research to develop a deep learning model for accurate brain tumor detection in MRI scans, achieving over **90% accuracy** and demonstrating promising results for improved patient outcomes in neurology.
- Implemented image enhancement and augmentation to optimize model performance and diversify training data.
- Achieved effective tumor localization, contributing to improved precision and outcomes in brain tumor detection.