Saurab Shrestha

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PROFESSIONAL SUMMARY

- **Profile**: Results-driven Software Engineer specializing in AI/ML, computer vision, and full-stack development. Expertise in developing intelligent document processing systems and implementing RAG-based solutions. Strong background in research, development, and deployment of machine learning models for real-world applications.

EXPERIENCE

- **Software Engineer** — April 2023 - Present
  QuickFox Consulting — *Kathmandu, Nepal*
  - **QuickRef**:
    - Designed and implemented an advanced Retrieval-Augmented Generation (RAG) pipeline, optimized for efficient document retrieval and question answering.
    - Developed scalable backend infrastructure using FastAPI and LlamaIndex, ensuring seamless integration with document ingestion and indexing workflows.
  - **QuickCCA**:
    - Spearheaded automation of cheque clearing processes, reducing manual workload and error rates through precise workflow optimization.
    - Developed a specialized Nepali OCR system tailored for cheque processing, enabling accurate recognition of cheque details.4

SIGNIFICANT PROJECTS

- **Signature Forgery Detection System**:
  - Developed a robust forgery detection system using Siamese Networks with ResNet-50 backbone
  - Implemented Triplet Loss for optimal feature learning and similarity measurement
  - Achieved competitive accuracy rates on CEDAR, BHSig260-Hindi, and BHSig260-Bengali datasets
  - Implemented comprehensive data preprocessing and augmentation pipeline
- **LocalGPT - Document Query System**:
  - Built a sophisticated local AI chat system for PDF document querying
  - Integrated LlamaIndex for text processing, Qdrant for vector storage, and Ollama for LLM operations
  - Implemented advanced RAG techniques for improved response accuracy
  - Designed scalable architecture supporting multiple document formats and query types

TECHNICAL SKILLS

- **Programming Languages**: Python (Advanced), C/C++, JavaScript, HTML/CSS, SQL
- **AI/ML Technologies**: PyTorch, Scikit-learn, OpenCV, CNNs, RNNs, LSTM, Transformers
- **Backend Development**: Django, FastAPI, Flask, REST APIs, Celery
- **Frontend & Automation**: React, RoboCorp, Selenium
- **Data Processing**: LlamaIndex, Numpy, Pandas, Vector Databases
- **DevOps & Tools**: Git, Docker, Postman, VS Code, Vim
- **Professional Skills**: Research & Development, Problem-Solving, Technical Documentation, Team Collaboration

EDUCATION

- **Bhaktapur Multiple Campus** — Bhaktapur, Nepal
  Bachelor in Computer Science and Information Technology; Percentage: 80% — *September 2018 - September 2023*
- **Premier College** — Baneshwor, Kathmandu
  National Education Board +2 in Science; GPA: 3.38 — *July 2016 - April 2018*