

PRABIN SARU

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SUMMARY

Associate AI/ML Developer with a foundation in Python-based data engineering and machine learning. Experienced in applying NLP and Computer Vision to build end-to-end projects like custom search engines and OCR pipelines. Committed to data integrity and rigorous testing within collaborative data science teams.

TECHNICAL SKILLS

- **Languages & Frameworks:** Python (Django, Flask), SQL, C++, REST APIs, Git.
- **AI/ML & Data:** NLP, Computer Vision (OpenCV, Tesseract), Scikit-learn, Pandas, NumPy.
- **Tools & Systems:** PostgreSQL, Linux, Embedded Systems (Arduino/STM32), IoT.

WORK EXPERIENCE

Lunar IT Solution | *Python-Django Intern* |

Sep 2024 – Nov 2024

- Developed RESTful APIs using Django REST Framework; implemented **token-based authentication** and role-based access control.
- Optimized database queries, improving application performance by **~30%** while maintaining version control via GitHub.

Lumbini World School | *IoT Instructor* |

Aug 2025 – Present

- Delivering hands-on training in IoT systems projects, from basic programming to final projects.
- Guiding students in designing, wiring, and debugging hardware projects (displays, motors, sensors, etc.).
- Teaching programming, serial debugging, and system integration.

PROJECTS

Tiny Search Engine & Web Scraper [[GitHub](#)]

- Engineered a custom search engine using **TF-IDF** ranking and an inverted index for efficient local file retrieval.
- Built a Python-based scraper and Web UI to process and query multi-format documents in real-time.

AI Resume Analyzer & Multilingual OCR [[GitHub](#)]

- Developed an **OpenCV/Tesseract** pipeline to extract structured data from multilingual (Nepali/English) document images.
- Implemented **NLP** entity extraction and classification to automate candidate profiling from unstructured resume layouts.

User Profiling & Segmentation (K-means / DBSCAN)

- Applied **Unsupervised Learning algorithms** to identify distinct segments within user datasets.
- Visualized high-dimensional clusters using **Matplotlib** and **Seaborn** to provide data-driven marketing insights.

EDUCATION

- Lumbini City College (TU) | B.Sc. CSIT
- Siddhartha English Boarding School | +2 Science

2020 – 2025

2017 – 2019

LANGUAGES

- English, Hindi, Nepali (Native)