

Sandesh Aryal

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EDUCATION

The University of Texas at Arlington | Arlington, Texas
Bachelor of Science in Computer Science (Honors)

Expected Graduation: May 2029

- Clubs/Experiences: *Association of Computing and Machineries (ACM), Fall 2025 PEAK Mentee*

SKILLS

Languages: Python, C, JavaScript, TypeScript, HTML/CSS, MySQL, PHP, PostgreSQL, MATLAB

Libraries/Frameworks: React, Node.js, Django, OpenCV, pandas, streamlit, NumPy, Matplotlib, FastAPI, Tkinter

Tools: Git/GitHub, VS Code, Vercel Hosting, Figma, Raspberry Pi, Bash/Shell, WordPress, PyCharm

EXPERIENCE

PA Clearing & Forwarding | Kathmandu, Nepal

October 2024 – May 2025

Data Analysis Assistant

- Optimized SQL queries to analyze 5k+ rows of shipment data, reducing manual report preparation time by 40% and improving reporting accuracy to 98%.
- Automated data pipelines by writing scripts to extract and transform logistics logs, leading to a 15% reduction in cross-departmental reporting errors compared to legacy Excel-only methods.
- Mentored by Lead Analyst to manage end-to-end data workflows, learning professional standards for data integrity and interdepartmental reporting in a high-stakes logistics environment.

VOLUNTEERING EXPERIENCE

Junior Chamber International Kapan (JCI) | Kapan, Kathmandu

August 2022 – May 2024

Junior Web Developer

- Developed and deployed a custom, responsive website for 75+ members by independently utilizing HTML, JS, and Tailwind CSS to replace an outdated manual system with a central digital hub.
- Engineered a user-centric interface and managed the end-to-end deployment pipeline, resulting in a 100% satisfaction rate from club leadership and a 25% increase in monthly user engagement.

PROJECTS

Demographix | Python, OpenCV, Streamlit, SQLite, Deep Learning

December 2025 – Present

- Engineered a 3-layer CV pipeline using ResNet-10 SSD & dual Caffe models achieving real-time inference (<50ms latency) by optimizing the OpenCV DNN module for local CPU execution, ensuring 100% data privacy.
- Implemented a Sliding-Window Majority Voting algorithm that reduced prediction variance by ~85%, leveraging a 20-frame temporal buffer to eliminate label flickering and ensure data integrity in the SQLite backend.

Subscriptions Manager | Python, IMAP, Regular Expression, Plotly

October 2025– Present

- Designed an automated finance tool utilizing IMAP protocol and Regular Expressions to parse digital receipts across multiple Gmail accounts, achieving 95%+ accuracy in extracting transaction amounts from unstructured email bodies.
- Engineered a real-time Streamlit dashboard to visualize monthly expenses with Plotly integration, reducing manual tracking time by ~90% through automated data cleaning and secure. env credential management.

IgKnight | CustomTkinter, Stockfish Engine, Selenium, Chess.com API

December 2025 – Present

- Participated in **HACKUTA** to engineer a tool using Selenium to scrape chess board states for Stockfish evaluation with <100ms latency; developed a CustomTkinter GUI to visualize move suggestions, synchronizing web DOM data with python-chess logic for instant feedback.

CERTIFICATIONS

- CS50: Introduction to Programming with Python – *Harvard University*
- Python for Data Science, AI & Development – *IBM*
- Introduction to HTML, CSS, JavaScript – *IBM*