Alok Silswal

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Education

Cluster Innovation Centre, University of Delhi   *August 2024 – Present*
BTech in Information Technology and Mathematical Innovation

- GPA: 9.27 / 10.0
- **Coursework:** Data Structure and Algorithm, Computer Structure and Architecture, Operating System

SKILLS SUMMARY

Languages:	C++, Python, Java, HTML, CSS, JavaScript
Frameworks:	Pandas, NumPy, Scikit-learn, Matplotlib
Tools:	Word, Excel, PowerPoint
Platforms:	Visual Studio Code, Google Colab, IntelliJ IDEA, Google Earth Engine

Projects

Species Distribution Modeling (SDM) – *Gyps indicus*   ⭕

- Built an end-to-end presence-only SDM using Google Earth Engine (GEE) and machine learning (Kernel Density Estimation) for habitat suitability mapping.
- Sampled 11K+ occurrence records and generated 77K background points in GEE; extracted climatic (WorldClim) and elevation (SRTM) variables at ∼1 km scale.
- Applied feature preprocessing (scaling, transformation) and evaluated model using AUC = 0.8664 (presence vs background).
- Generated Gaussian-smoothed occurrence density heatmaps and predicted habitat suitability maps, visualized in Python and GEE for spatial validation.

  Tech Stack: Python, JavaScript (Google Earth Engine), scikit-learn, Pandas, NumPy, Matplotlib

JumpYT – YouTube Timestamp Bookmarking Browser Extension   ⭕

- Built a browser extension integrated into YouTube's UI for saving, labeling, editing, and navigating timestamps.
- Implemented dynamic DOM injection and event-driven logic while preserving native player behaviour.
- Engineered per-video persistent storage using browser local storage with session consistency.
- Validated extension permissions, manifest configuration, and correctness using automated linting.

  Tech Stack: JavaScript (ES6), HTML, CSS, Browser Extension APIs

Chikitsa – Ayurvedic Remedy Information (Frontend)   ⭕

- Built a static, responsive informational website presenting Ayurvedic remedies with a clean and accessible frontend layout.

  Tech Stack: HTML, CSS, JavaScript

Internship

- **Vice-Chancellor Internship Scheme**   *November 2025 – Present*

Extracurricular Activities

- Secured **1st place** in NDIM IPL Auction Event.
- Secured **2nd place** at UDGAAR Inter-College Anti-Addiction Quiz Competition.