

# Alok Silswal

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## Education

### Cluster Innovation Centre, University of Delhi

August 2024 – Present

B.Tech 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:** Colab, Visual Studio Code, IntelliJ IDEA

## Projects

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

- Built an end-to-end SDM using Google Earth Engine (GEE) and ML (KDE + GMM ensemble) on presence-only data.
- Sampled 11K+ occurrence records and generated 77K background points; extracted climatic and elevation variables at ~1 km scale.
- Performed data cleaning, feature selection, scaling, and KDE bandwidth tuning; evaluated model using AUC = 0.7123.
- Visualized occurrence density, environmental layers, and predicted habitat suitability as heatmaps in Python and GEE.

*Tech Stack:* Python, 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.