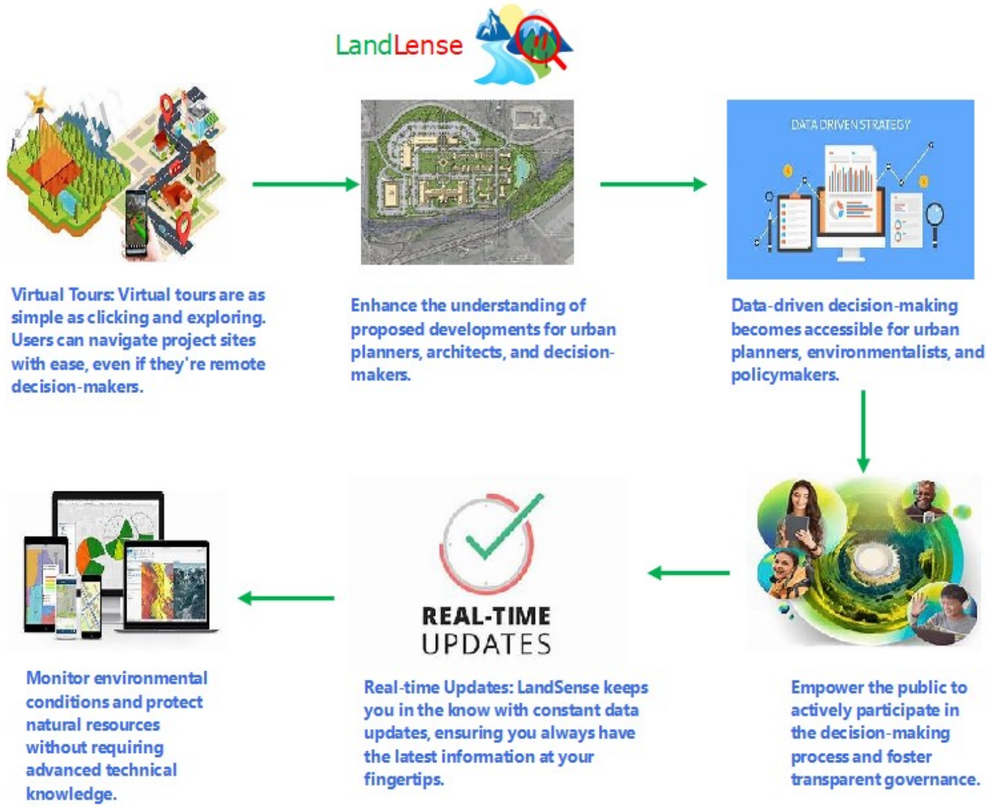
Basic Details of the Team and Problem Statement



Ministry Name : Ministry of coal

PS Code:1318

Problem Statement Title: Analytics based on Govt. Land Information System(GLIS) Data

Team Name: Spartan2023

Team Leader Name: Neha Deepak puri

Institute Code (AISHE): C-41256

Institute Name: K K Wagh Institute of Engineering Educational Research, Nashik

Theme Name: Agriculture, FoodTech & Rural Development

Introduction:

- LandLens is the transformative solution that seamlessly integrates the **Government Land Information System (GLIS)**
- Data Integration: We begin by connecting with GLIS, unlocking its wealth of geospatial data related to land resources, boundaries, and land use.
- LandLens is built on a robust technology foundation, incorporating cutting-edge elements such as **machine learning, data analytics,** and **geospatial analysis.**
- or urban planners, **LandLens** provides invaluable analytics tools. These tools facilitate data-driven decisions about land use, zoning regulations, and infrastructure development.
- LandLens deploys analytics models to identify optimal locations for infrastructure projects, taking into account environmental impact, accessibility, population density, and existing infrastructure.
- Our approach to **environmental conservatio**n involves monitoring and managing natural resources, protected areas, and environmental impact assessments. This allows us to pinpoint ecologically sensitive areas, prioritize conservation, and strategize risk mitigation.
- LandLens simplifies land administration, registration, and land-use planning, enhancing transparency, streamlining land transactions, preventing encroachments, and supporting equitable land resource distribution.
- Through **data analytics**, we enable socio-economic analysis at various spatial scales. By correlating land characteristics, demographic data, economic indicators, and social factors, LandLens uncovers patterns, disparities, and potential interventions for inclusive development
- **Real-time Insights**: Users benefit from real-time insights, meaning they can access and **act** upon the latest information.

Describe your Technology stack here:

Frontend: HTML, CSS, JavaScript.

Backend: Node.js, Python (Django, Flask).

Database and Data Storage: MySQL, MongoDB.

Programming Languages: Python

Geospatial Tools: ArcGIS, QGIS.

Machine Learning Libraries: Scikit-Learn, TensorFlow, PyTorch.

Data Visualization Platforms: Power BI.

Cloud Computing: , Azure

Describe your Use Cases here

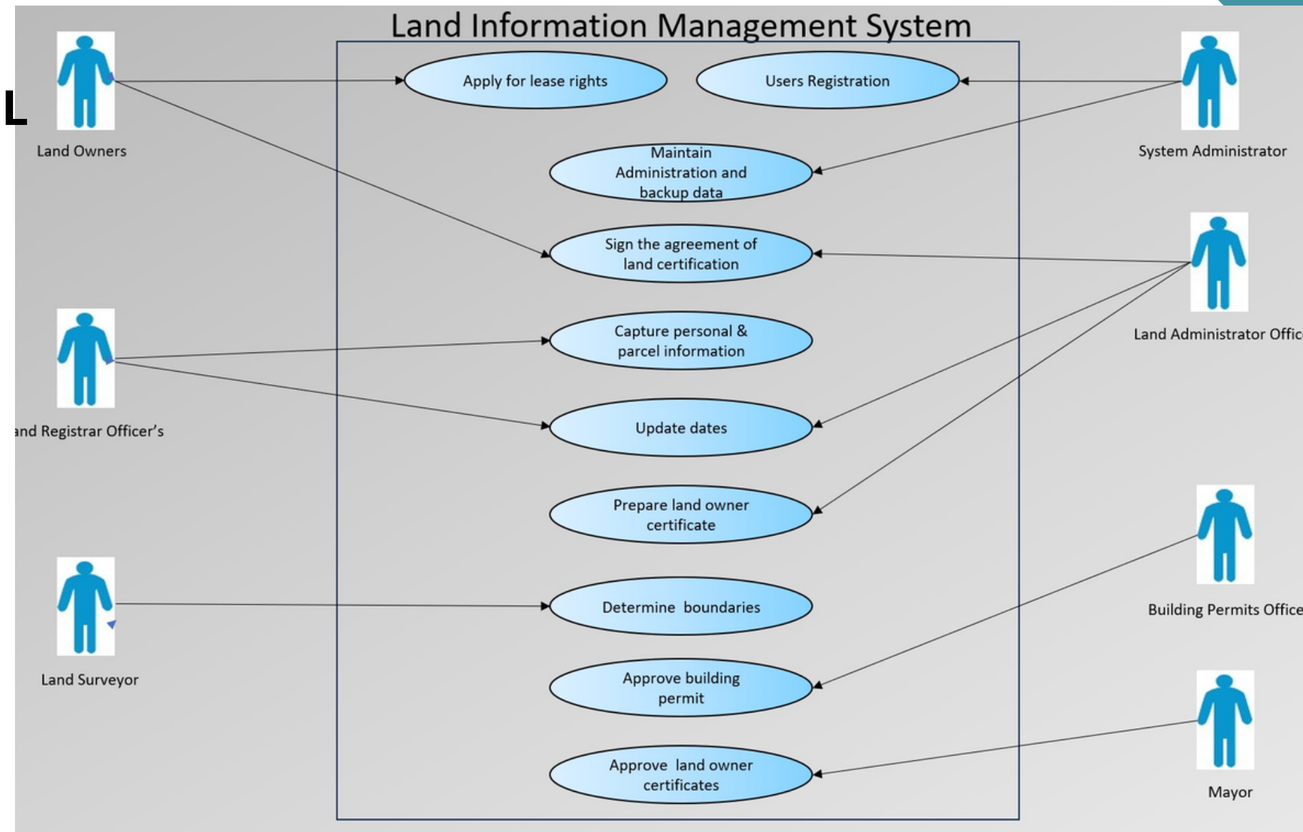
- **Urban Planners**: Simulate zoning changes, explore infrastructure options, and optimize city planning to enhance urban mobility and the quality of life in cities.
- **Government Agencies:** Identify ideal infrastructure locations, reduce environmental impact, and allocate resources wisely for sustainable and efficient development.
- **Conservationists**: Monitor ecosystems and respond to environmental risks in real-time, ensuring the protection of ecologically sensitive areas.
- **Land Management and Governance**: Streamline land administration, registration, and land-use planning processes, enhancing transparency, preventing encroachments, and ensuring equitable land resource distribution.
- **Policymakers:** Utilize socio-economic analyses to make data-driven decisions, fostering inclusive development and targeted interventions.

LANDLENSE

LandLense

Describe your Dependencies Show stopper here

- The application is efficiently manage and analyze vast geospatal datasets for comprehensive.
- Ensuring data accuracy and reliability is pivotal for informed decision making.
- The solution offer predicitive models to support proacive decision.
- User interface design is ease to use, making the insights accessible to non-technical stakeholders.
- Effectively utilizing GLIS data requires advanced geospatial analysis and expertise.
- Translating the data into user-friendly and meaningful insights is essential for decision-makers.



Team Member Details

Team Leader Name: Neha Deepak Puri
Branch : BE Stream : AI & DS Year : III

Team Member 1 Name: Apeksha Ravindra Gangurde
Branch : BE Stream : AI & DS Year : III

Team Member 2 Name: Mansi Jitendra Joshi
Branch : BE Stream : AI & DS Year : III

Team Member 3 Name: Kanchan Kishor Supekar
Branch : BE Stream : AI & DS Year : III

Team Member 4 Name: Samrudhi Gajendra Mulay
Branch : BE Stream : AI & DS Year : III

Team Member 5 Name: Shrushti Anil Ahire
Branch : Btech Stream : CSE Year :I

Team Mentor 1 Name: N M Shahane
Category : Academic Expertise (AI/ML/Blockchain etc): AI Domain Experience (in years): 15+

Team Mentor 2 Name: D D Bage
Category : Academic Expertise (AI/ML/Blockchain etc): IOT,AI Domain Experience (in years): 10+