



# ECO COUNT : AI FOR FOREST CONSERVATION

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QUANTUM CODERS

# PROBLEM STATEMENT

01.

Deforestation and urbanization are affecting biodiversity

02.

Manual tree counting is inefficient for large-scale monitoring

03.

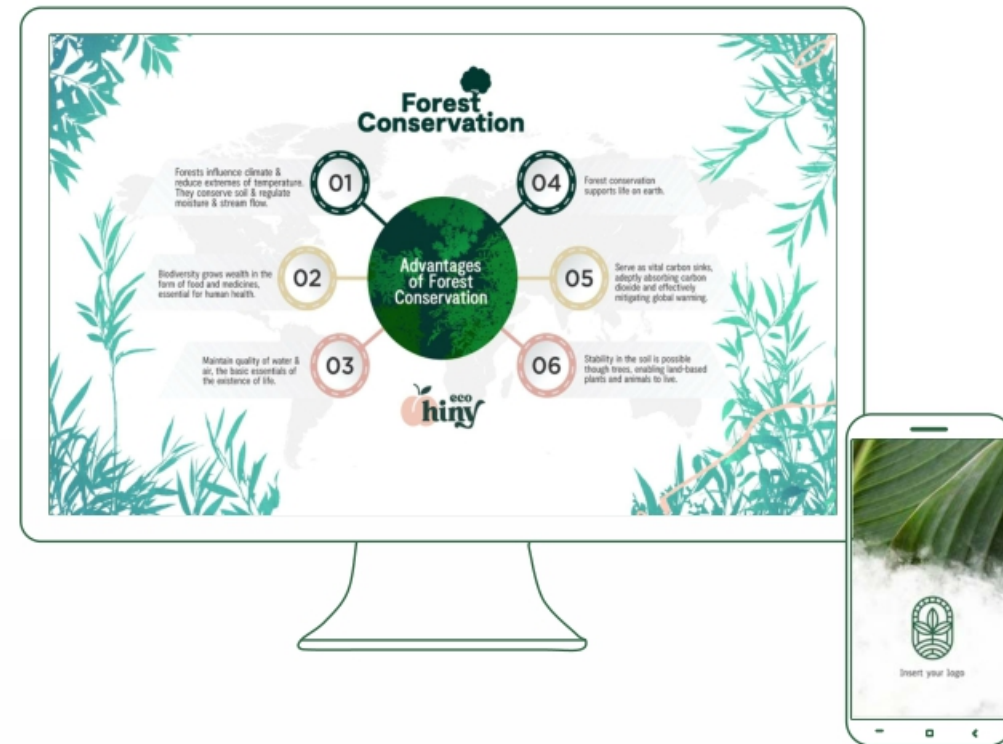
Need for AI-driven tree enumeration and pathfinding solutions





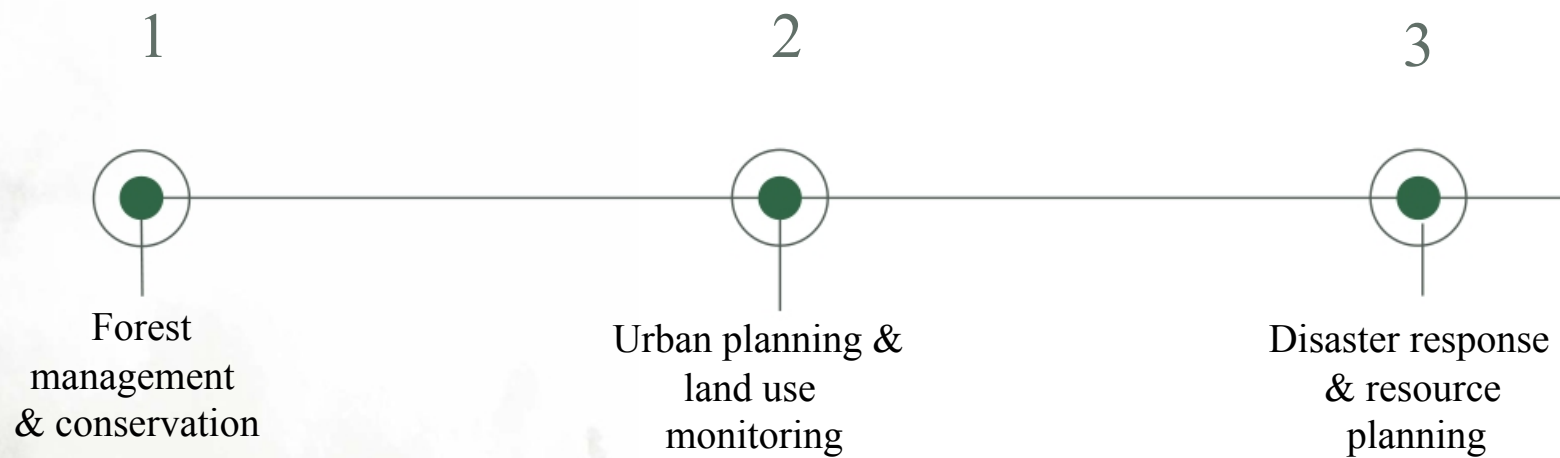
# SOLUTION

1. Data Collection: Satellite imagery from public sources.
2. Data Preprocessing: Image resizing, augmentation.
3. Model Selection: YOLOv8 and Faster R-CNN for tree detection.
4. Training & Evaluation: Precision, recall, F1-score.
5. Pathfinding: Algorithm for optimal navigation



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# APPLICATION



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# RESULT AND FINDINGS

1

YOLOv8 achieved high accuracy in tree detection.



2

Faster R-CNN performed better in complex environments.



3

Algorithm provided efficient and environmentally safe paths.



4

Web application developed for real-world usability.



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# SYSTEM ARCHITECTURE

1. Satellite imagery input.
  2. AI-based tree detection using deep learning models.
  3. Path finding using Algorithm and web application for user interaction.
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# CONCLUSION AND FUTURE WORK

- ❑ AI-driven tree enumeration improves efficiency.
- ❑ Algorithm ensures sustainable pathfinding.
- ❑ Future work: Enhanced dataset diversity, model robustness, real-time monitoring.

