

## APIs for Tree Identification

### 1. Plant.id API

- **Developer:** Kindwise
  - **Description:** A powerful AI-based image recognition API that identifies plant and tree species, including their health condition.
  - **Features:**
    - Identifies vernacular name, scientific name, and common name.
    - Can detect diseases and estimate plant health.
    - Offers confidence scores and multiple suggestions.
  - **Use Case:** Ideal for integrating into mobile/web apps for tree recognition using photos.
  - **Access:** Requires API key. Python SDK available.
  - **Website:** <https://www.kindwise.com/plant-id>
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### 2. Roboflow Universe – Tree Species Identifier

- **Developer:** Roboflow
  - **Description:** Provides a trained model for tree species identification which can be used with APIs in real-time or batch mode.
  - **Features:**
    - Deployable on Raspberry Pi, Python scripts, or cloud-based apps.
    - Customizable and scalable for tree identification workflows.
  - **Use Case:** Best suited for custom tree classification applications in varied environments.
  - **Access:** Requires Roboflow account and API access.
  - **Website:** <https://universe.roboflow.com>
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### 3. Tree-Nation API

- **Developer:** Tree-Nation
  - **Description:** Focuses on reforestation tracking and management by enabling tree planting via API integration.
  - **Features:**
    - Trigger planting events from your app.
    - Fetch tree details: species, planting location, and proof (URL).
  - **Use Case:** Best for CSR integrations, gamification, and sustainability tracking.
  - **Access:** Requires developer account and API token.
  - **Website:** <https://tree-nation.com>
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### 4. Pl@ntNet API

- **Developer:** CIRAD, INRAE, Inria
  - **Description:** A collaborative plant identification service based on user-submitted images and AI.
  - **Features:**
    - Identifies tree and plant species using leaf, flower, bark, and fruit images.
    - Returns scientific and common names with accuracy scores.
  - **Use Case:** Useful for multi-angle tree image analysis.
  - **Access:** Free for academic use; requires API registration.
  - **Website:** <https://identify.plantnet.org>
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## 5. Perennial API

- **Developer:** Perennial
  - **Description:** Offers detailed plant data including tree identifiers, sunlight requirements, watering needs, and hardiness.
  - **Features:**
    - Provides plant/tree info with images and usage guidelines.
    - Includes endangered status and environmental conditions.
  - **Use Case:** Good for knowledge-building apps or tree care tools.
  - **Access:** Requires API key.
  - **Website:** <https://perennial.com/docs/api>
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## 6. iNaturalist API

- **Developer:** iNaturalist / California Academy of Sciences
- **Description:** Community-driven biodiversity database for species identification including trees.
- **Features:**
  - Species recognition via images and observation data.
  - Provides scientific classifications and location data.
- **Use Case:** Ideal for biodiversity and environmental monitoring apps.
- **Access:** Open API; limited rate for unauthenticated requests.
- **Website:** <https://www.inaturalist.org/pages/api+reference>