



SANTA CLARA UNIVERSITY

# Treedentity



Nishita Battula  
Aditi Bellary  
Michael Campos  
Tejaswi Sagiraju





## Introduction

- **Community partner**
  - Peterson Middle School
  - Outdoor Nature Center
  - Liaison: Bryan Osborne
- **Why we picked Peterson**
  - Educational impact
  - Scope for creativity
  - Match of skillsets





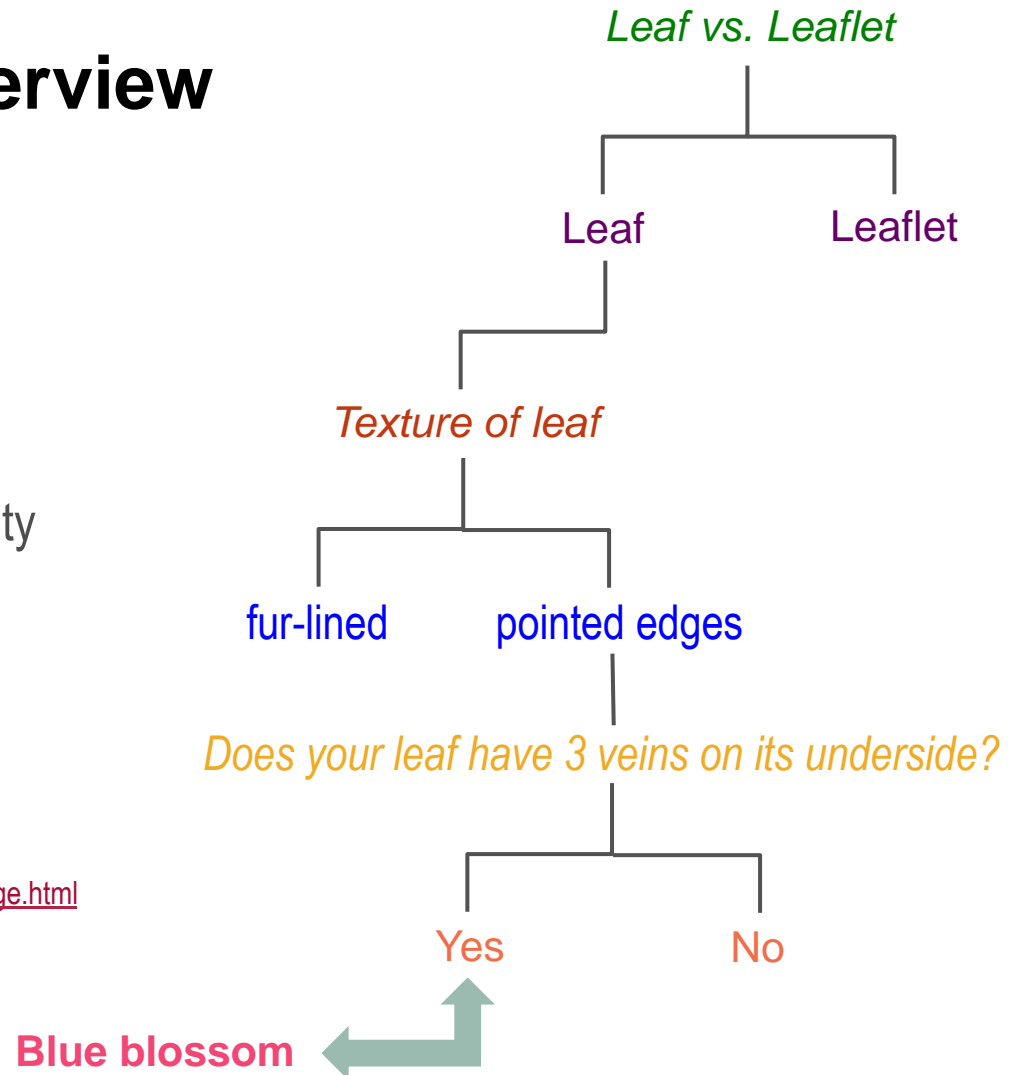
## Customer Requirement

- Online version of dichotomous tree key that is accessible to an entire middle school class
- Product should enable autonomous decision-making
- Self-imposed design criteria:
  - Aesthetically pleasing
  - Interactive interface
  - User friendly
  - Easily navigable



## Technical Overview

- **Decision tree workflow**
- **Architecture**
  - Languages: HTML, CSS
  - Modular code to allow scalability (expansion of trees)
  - Removal of redundant pages
  - Compatible platforms
- **DEMO**
  - <http://www.peterson.scusd.net/treedentity/homepage.html>





## Civic Issues

- School board guidelines & regulations
- Federal Trade Commission (FTC) governs internet content
- Cyber security for impressionable kids



## Societal Impact

- Promotes engagement with natural world
- Replaces strict textbook learning with hands-on, immersive experiential learning
- Zero cost implementation
- Encourages students to pursue STEM



## Challenges

- Organizing data simply & elegantly
- Condensing blocks of text
- Visually stimulating layout





## Enhancement Ideas

- **Voice-enabled mobile app**
  - Natural Language Processing / Voice Recognition
- **Links to Simple English explanations instead of conventional Wikipedia**
- **Google map of Nature Center with pins**
- **Animations**

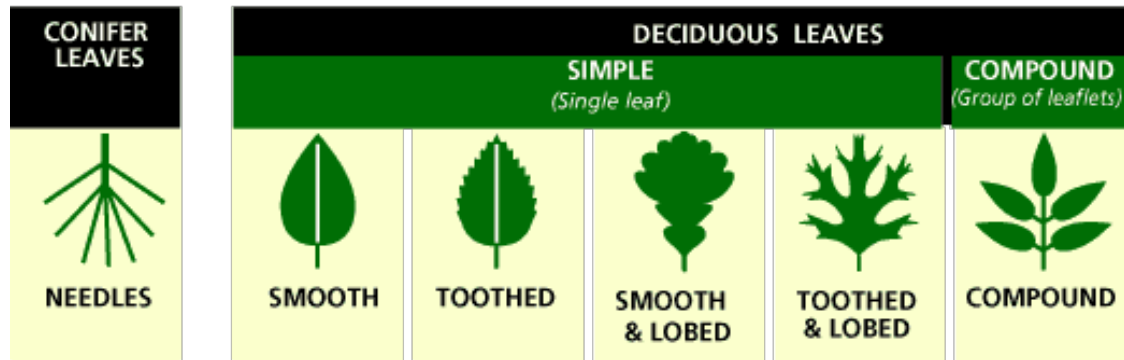






## Conclusion

- What we learned
- Acknowledgements





## Image Sources

- [http://www.extension.iastate.edu/forestry/iowa\\_trees/terms/itik\\_logo.jpg](http://www.extension.iastate.edu/forestry/iowa_trees/terms/itik_logo.jpg)
- <http://treeblog.hansels.net/meet-the-tree/>
- <http://www.greenwing.org/newgreenwing/activities/summerwebfoot%20copy/leaf3.gif>
- <http://www.hindererhonda.com/images/mapimage.png>
- <http://www.icone-png.com/png/52/51719.png>