As part of the i-Tree Academy course, students will plan and complete a small i-Tree project. Conducting a project will provide practical experience, reinforce the training, and help share the value of i-Tree with communities or other individuals. The project could involve conducting an assessment which uses one or more i-tree tools in a community, or conducting a small i-tree training/workshop with others who are interested. Students will share a summary of their completed project with the class and with the community involved. Completing this summary form, will serve as a starting point for your project.

**Student Name:** Lorena Alves Carvalho Nascimento

**Employer or Organization:** Portland State University

**Project Title or Type:** Analyzing the canopy cover of Macae, Brazil

**Name of Community, Geographic Area and/or Tree Resource Involved:** Macae, RJ, Brazil
Objective of Project – What Issue Will You Address: Estimate the canopy cover change of Macae municipality, considering the urban and rural districts.

Key i-Tree Tools to Be Used: iTree Canopy (using Florida or Hawaii as a reference, as latitude is 22°)

Brief Description of Project: Macae is a city in the State of Rio de Janeiro, Brazil. The main economy is oil offshore operations, which have an impact on the conservation of the coastal ecosystems. Macae has an urban area by the coast and rural/forest districts by the mountains. In this project, I will do four canopy assessments based on Google Earth Images: Macae urban area 2016; Macae urban area 2006; Macae rural districts 2016; Macae rural districts 2006. Each analysis will have 500 points on iTree Canopy. The goal is to analyze if the canopy cover change is higher in the urban areas or in the whole municipality.

Partners/Others Who Will Assist (If any): Agua e Juventude, a youth study group in Macae about water and basic sanitation.

Proposed Time Line:

<table>
<thead>
<tr>
<th>Week</th>
<th>Activity</th>
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<tbody>
<tr>
<td>Week 1 – 03/30 to 04/05</td>
<td>Collect and clean data; 2016 canopy analysis; write methods</td>
</tr>
<tr>
<td>Week 2 – 04/06 to 04/12</td>
<td>2006 canopy analysis, generate maps; write results</td>
</tr>
<tr>
<td>Week 3 – 04/13 to 04/19</td>
<td>Write introduction, discussion of results</td>
</tr>
<tr>
<td>Week 4 – 04/20 to 04/26</td>
<td>Create ESRI story map and share the final project</td>
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Resources Needed: iTree Canopy, Google Earth, ESRI Story maps, ArcGIS, shapefiles provided by Macae municipality

Describe End Products: ESRI Storymap with the canopy cover change of Macae urban and rural districts.

Can We Use Your Project Work Time as Grant Match?:

The i-Tree Academy is supported by a grant from the U.S. Forest Service. Student time spent on completing these projects may be used to help match this grant (unless that time is paid for with federal funds, or used to match other federal funds).

Are you eligible to use your time as part of the match? Yes
Are you willing to have us use your project time as part of the grant match? Yes