From Students…
…to Professionals

The Capstone Experience

Alpha Presentation

Yard Wars: Weathering the Storm

Team Auto-Owners

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Project Overview

• Virtual reality application
• Place trees around the yard of a virtual residence
• Simulate different storms on the property
• Determine if the trees pose a risk or help protect the home
• Send simulation data to an external database
• View and analyze on the website
System Architecture
Storm Selection Menu
Tree Menu
Tree Placement
Falling Trees
## Website Data

### Simulation Data

<table>
<thead>
<tr>
<th>Simulation ID</th>
<th>Difficulty level</th>
<th>Rain</th>
<th>Wind</th>
<th>Hail</th>
<th>Number of Trees</th>
<th>Damage Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Hard</td>
<td>Heavy</td>
<td>Severe</td>
<td>Large</td>
<td>8</td>
<td>8:Y, 6:N, 4:N, 2:N</td>
</tr>
<tr>
<td>2</td>
<td>Medium</td>
<td>Moderate</td>
<td>Moderate</td>
<td>Medium</td>
<td>8</td>
<td>8:Y, 7: N, 6:N, 4:Y, 2:N</td>
</tr>
<tr>
<td>3</td>
<td>Easy</td>
<td>Light</td>
<td>Light</td>
<td>Small</td>
<td>7</td>
<td>3:N</td>
</tr>
<tr>
<td>4</td>
<td>Custom</td>
<td>Heavy</td>
<td>Moderate</td>
<td>Small</td>
<td>8</td>
<td>3:N, 4:N, 8:N</td>
</tr>
</tbody>
</table>
What’s left to do?

• More accurate damage and weather calculations
• Additional UI to track fallen trees, damage, weather and time
• Tree protection calculation
• Additional weather visual effects (hail, wind direction)
• Visual damage to home
• Search/Filter website data
Questions?