FPR Presentation
SmartWheel

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Overview \ Block Diagram

SmartWheel Box

- Accelerometer
- GPS Module
- Power Supply

Data Processing

Home Box

- Storage
- Website UI

SmartPhone

- Data Processing
- Phone UI
FPR Deliverables

Proposed Deliverables
- Fully integrated system

Added Deliverables After Feedback
- Phone Application Addresses
- Various Text Message Alerts
- SmartWheel Misposition Detection
- 3D Printed Case
- Web User Interface
Accelerometer

Right Turn

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Smartphone Application

Improvements
- Added more options for acceleration
- Added addresses
- Changed map to satellite view
Website User Interface

SmartWheel
We watch behind your wheels

Here is the Chart of your recent acceleration

you have 4 times dangerous driving

Remind User by Email: click Here
Take a look at the data history click Here

Bookmark This Page
OneDrive

- Similar to google Drive.
- Gives the embed code for website programming.
3D Printed Case (TinkerCad)

- Free to Use
- Saving .STL Files Online
- Easy for Beginners
Indicator and Reset Button

**Indicator:**
- Blink: connect to serve
- On: working
- Off: stop working

**Reset Button:**
- Reset Python code
### Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Proposed</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimensions</td>
<td>11x8x5 cm^3</td>
<td>11.5x8.5x4.5 cm^3</td>
</tr>
<tr>
<td>Weight</td>
<td>250 grams</td>
<td>340 grams</td>
</tr>
<tr>
<td>Battery Life</td>
<td>12 hours</td>
<td>16 hours</td>
</tr>
<tr>
<td>Unit Price</td>
<td>&lt;$150</td>
<td>&lt;$120</td>
</tr>
<tr>
<td>Text Message Alert Delay</td>
<td>&lt;15 seconds</td>
<td>&lt; 10 seconds</td>
</tr>
<tr>
<td>Storage Capacity</td>
<td>72 hours of driving</td>
<td>14 days of driving</td>
</tr>
<tr>
<td>Server Connection Radius</td>
<td>&gt;15 meters with a wall between</td>
<td>&gt;70 meters in open area; &gt; 32.5 meters with a wall in between.</td>
</tr>
</tbody>
</table>
DEMO
Thank you!
Safe Acceleration
Dangerous 8 Left Turns
Wiggling, Dangerous Acceleration/Deceleration