

## Create and view a Brainstorming related to problem within or community around the University

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Absent Student			
	Inconveniences	Uncomfortable	
At Home	4 problems  <div><div>1.</div><div>Smart Home System: Using IoT devices and a simple coding language like Python, you can create a system that allows you to control all the electrical appliances in your home from one central application</div></div> <div><div>2.</div><div>Energy Monitoring: By using a simple current sensor attached to your main power line and a Raspberry Pi, you can monitor your home's energy usage in real-time.</div></div> <div><div>3.</div><div>Automated Gardening System: With a few sensors, actuators, and a microcontroller like Arduino, you can create a system that waters your plants based on soil moisture levels.</div></div> <div><div>4.</div><div>Home Security System: Using basic hardware like PIR sensors for motion detection, magnetic sensors for door/window breach detection, and a Raspberry Pi for control, you can build a simple home security system.</div></div>		
In University	4 problems  <div><div>1.</div><div>Lab Equipment Control: Many pieces of lab equipment have interfaces that allow them to be controlled by a computer. With some coding knowledge, you can automate repetitive tasks.</div></div> <div><div>2.</div><div>Data Acquisition and Analysis: Using simple hardware like Arduino or Raspberry Pi and sensors, students can collect real-world data and analyze it using coding languages like Python or MATLAB.</div></div> <div><div>3.</div><div>Robotics Projects: Universities often have robotics clubs or courses where students can apply their mechanical and electrical engineering knowledge. This often involves building physical systems and writing code to control them.</div></div> <div><div>4.</div><div>Navigation System in the University: Develop a smart campus navigation system that helps students and visitors efficiently find their way around the university's large and complex campus. This system should utilize real-time data, including</div></div>		

	<p>building occupancy, class schedules, and campus events, to provide optimal routes and information to users through a mobile app or other means.</p>
<b>Around community</b>	<p>4 problems</p> <ol style="list-style-type: none"><li>1. Traffic Light Control: Traffic lights can be optimized using simple sensors and some coding to reduce congestion and improve traffic flow.</li><li>2. Weather Station: A community weather station can be built using basic sensors (like temperature, humidity, pressure sensors) and a microcontroller. The data can be shared with the community through a simple web application.</li><li>3. Community Energy Usage Monitoring: Just as with home energy monitoring, this concept can be expanded to a community level. Data could be shared with residents to encourage energy-saving behaviors.</li><li>4. Public Infrastructure Maintenance: Simple sensors can be used to monitor the condition of public infrastructure (like bridges or roads). The data can be analyzed using code to predict when maintenance will be needed.</li></ol>