



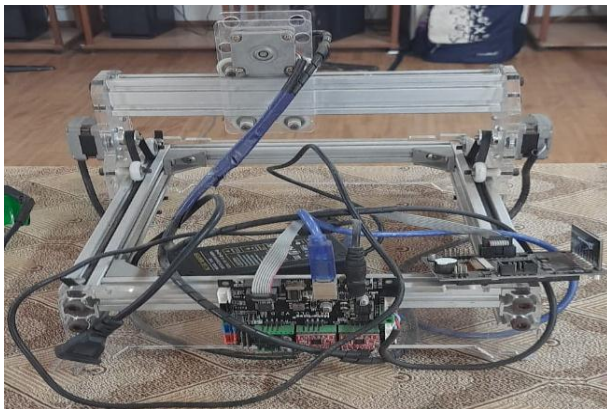
## Innovative Projects and Models Ajay Binay Institute of Technology



**SOLAR E-RICKSHAW**



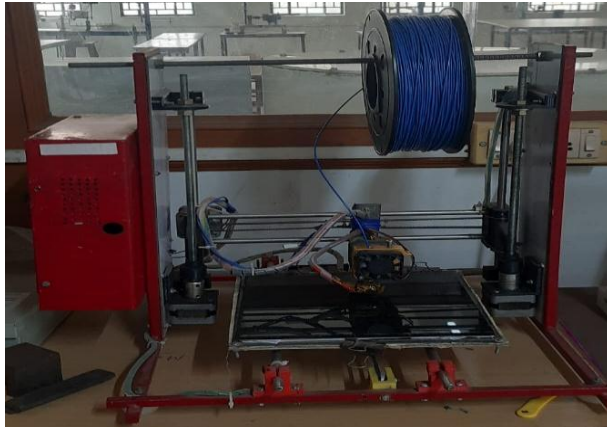
**E-BIKE**



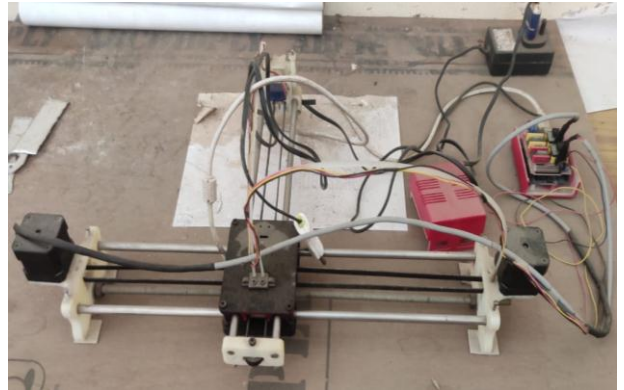
**CNC LASER CUTTING MACHINE**



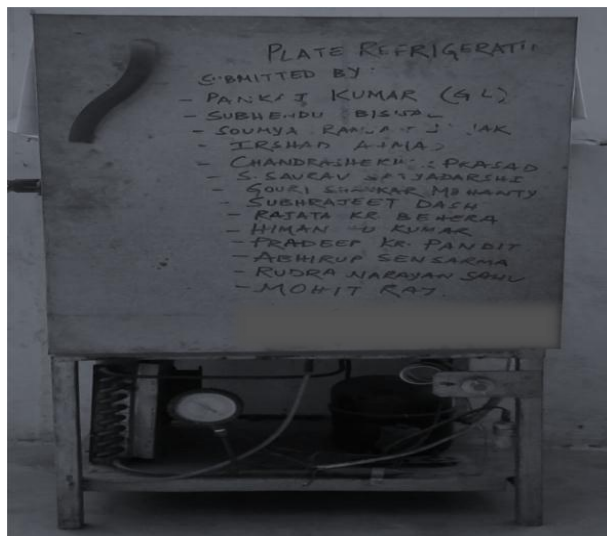
**CNC LASER MILLING MACHINE**



**3D PRINTING MACHINE**



**2D WRITING MACHINE**



**PLATE REFRIGERATION**

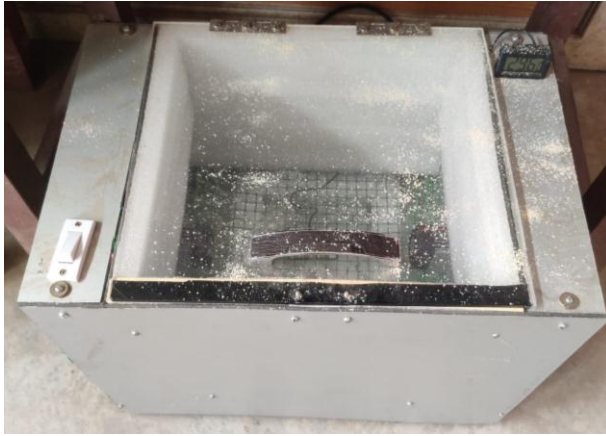


**THERMO ELECTRIC REFRIGERATION**





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**THERMO ELECTRIC CHILLER**



**CRITICAL HEAT FLUX APPARATUS**

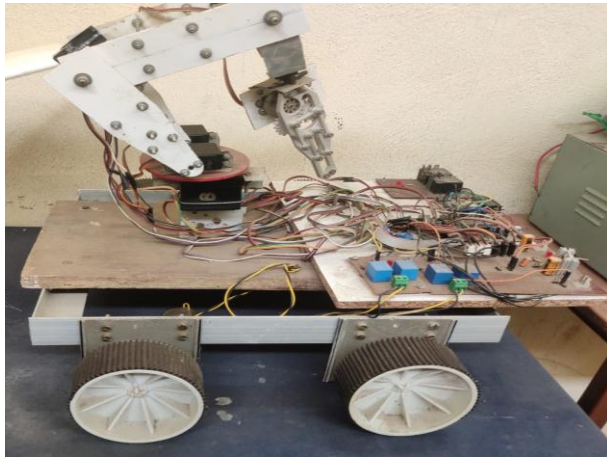


**DRONE**

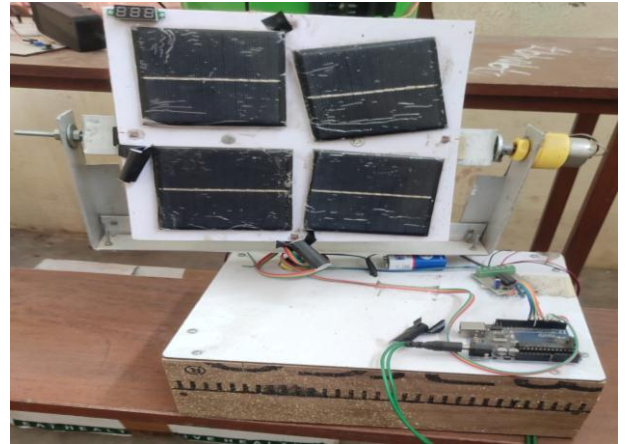


**AEROPLANE**

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C.D.A., CUTTACK



**GESTURE CONTROLLED ROBOT**



**SOLAR TRACKER**



**PAPER PLATE MAKING MACHINE**



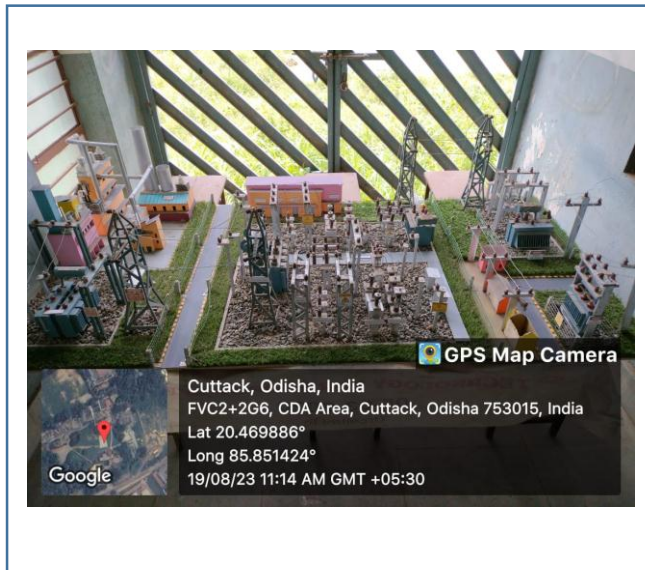
**ABRASSIVE JET MACHINING**





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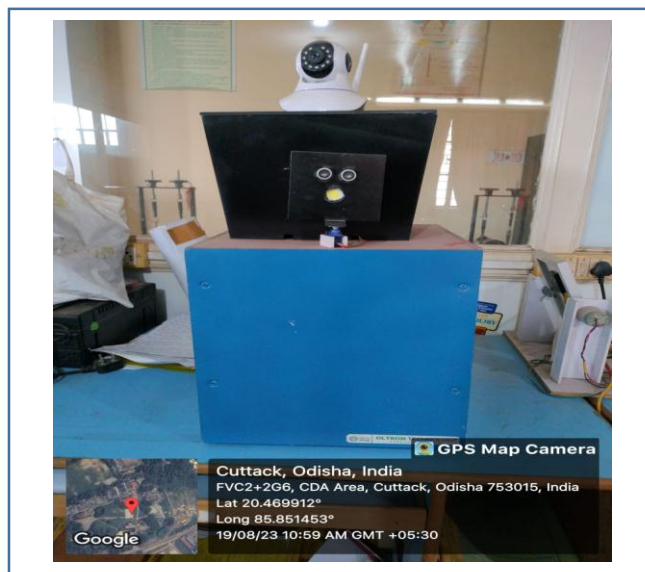
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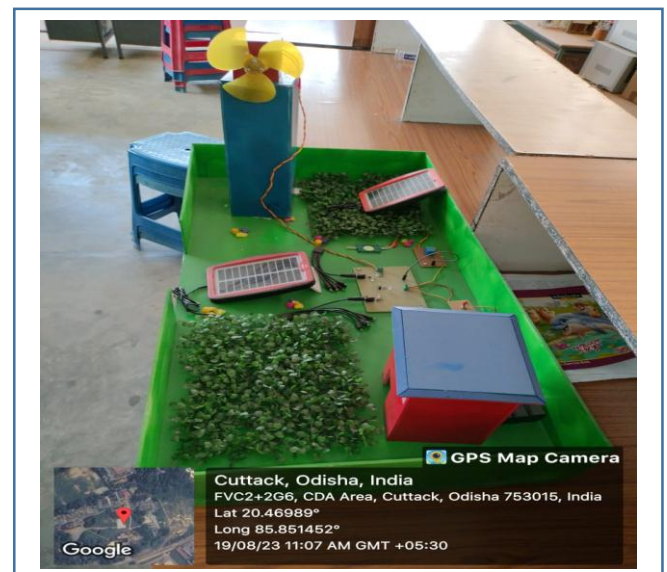
**MODEL OF ELECTRICAL SUPPLY SYSTEM**



**IRRIGATION ROBOT**



**SPY ROBOT**

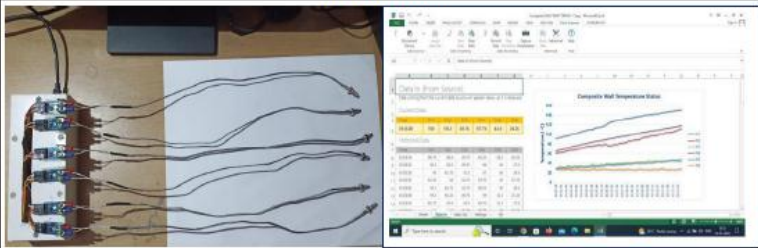

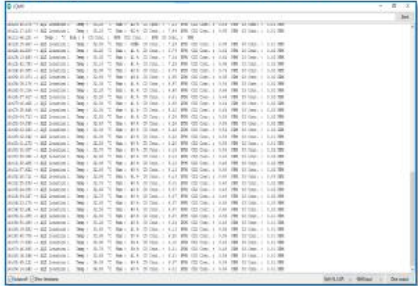


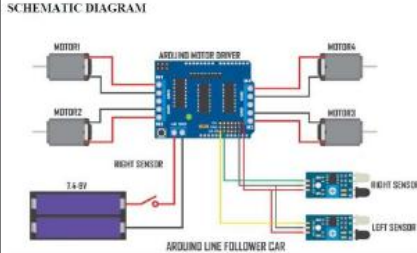



**RENEWABLE ENERGY SOURCES**

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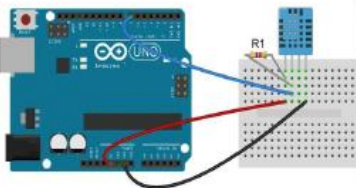

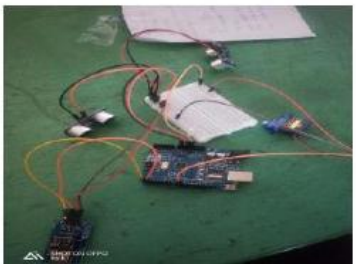
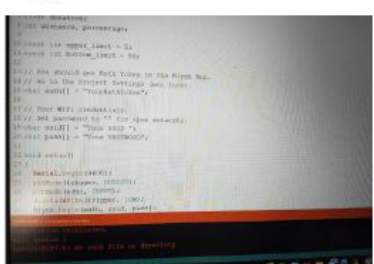
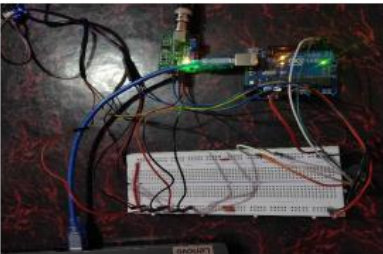

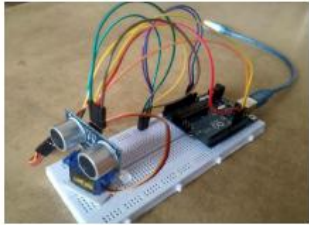
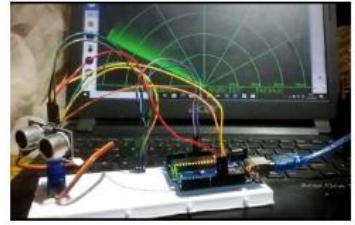
## Project Execution & Development

Faculty	Work Item/Project Topic	Results/Outcome
D Behera	<p>Data Acquisition and visualization of six thermocouples sensors.</p> <p>(Mechanical project completed)</p> <ul style="list-style-type: none"> <li>• Arduino Mega dev board</li> <li>• Thermocouple Sensors (MAX 6675) - 6 Nos.</li> <li>• MS Excel's Data Streamer</li> </ul>	 <p>Prototype developed and submitted to Mechanical Engg. Dept.</p> <p>Test Result</p>
D Behera	<p>Location based Air quality Index monitoring using LoRa-Technology.</p> <p>(Student minor project under progress)</p> <p>Long range Real time sensing of location based Air quality.</p> <ul style="list-style-type: none"> <li>• Location</li> <li>• CO<sub>2</sub></li> <li>• CO</li> <li>• O<sub>3</sub></li> <li>• Temperature</li> <li>• Humidity</li> </ul>	 

		<p>Prototype Testing at Madhusudan Setu, CDA Km)</p> <p>Test Result (Maximum range of data communication found at ≈1.7 Km)</p>
A Sahoo	<p>LINE FOLLOWER FLOOR DISINFECTANT ROBOT.</p> <p>(Student minor project under progress)</p> <p>FEATURES: it can detect and follow the line drawn on the floor and clean the bacteria present in its path</p> <p>APPLICATIONS:  <ul style="list-style-type: none"> <li>• Industrial Applications: These robots can be used as automated equipment carriers in industries replacing traditional conveyor belts.</li> <li>• Automobile applications: These robots can also be used as automatic cars running on roads with embedded magnets.</li> <li>• Domestic applications: These can also be used at homes for domestic purposes like floor cleaning etc.</li> <li>• Guidance applications: These can be used in public places like shopping malls, museums etc. to provide path guidance.</li> </ul> </p>	<p>SCHEMATIC DIAGRAM</p>  <p>Prototype</p>  <p>Test Results</p>
A Sahoo	<p>CONTROLLING DEVICE FROM AWS CLOUD USING ESP32-S</p> <ul style="list-style-type: none"> <li>• ESP 32 Dev board</li> <li>• Device programming</li> <li>• Connecting to AWS IoT</li> <li>• LED control</li> </ul>	 <p>Prototype</p>  <p>Test Results</p>





D Mishra	<p><b>IoT Based Humidity &amp; Temperature Monitoring Using Arduino Uno.</b></p> <p>(Student minor project under progress)</p>	 <p align="center">Prototype</p>	 <p align="center">Test Results</p>
B C Das	<p><b>Smart Dustbin</b> (Student minor project under progress)</p> <ul style="list-style-type: none"> <li>IoT based Dustbins help the people to manage the waste easily and help them reduce the work of calling or waiting for the specific person to make the area clean and makes a healthier environment to live.</li> <li>Assures the cleaning of dustbins soon when the garbage level reaches its maximum.</li> <li>If the dustbin is not cleaned in specific time, then the Record is sent to the Sweeper or higher authority who can take appropriate action against the concerned contractor.</li> </ul>	 <p align="center">Prototype</p>	 <p align="center">Test Results</p>
P Nanda	<p><b>Real Time monitoring system for Fish Farm Environment</b></p>	 <p align="center">Prototype</p>	 <p align="center">Test Results</p>
S L Mohapatra	<p><b>Arduino Based Radar</b></p> <p>Target:</p> <ul style="list-style-type: none"> <li>Identify the object</li> <li>Distance between the object and radar</li> <li>Speed of the Object</li> <li>Sound of the Object</li> </ul>	 <p align="center">Prototype</p>	 <p align="center">Test Results</p>