This is engineering

Engineers create ideas and solve problems using maths and science.

ENGINEERING

Engineers uses scientific principles to design the things we use and see around us. This includes buildings, structures, machines, bridges, vehicles (land and sea), tunnels, roads and other items. [1]

More common fields of engineering

- Civil-deals with building and structures
- Mechanical- their area of focus is everything machinery
- Electrical-everything electrical
- Chemical- combine the three sciences and engineering to carry out work. [5]

Sub-disciplinaries:

- Environmental: focus on factors affecting the environment, they protect the environment and resolve issues.
- Marine: focus on the machinery and equipment used at sea.
- Mechatronics: this combines the four major field of mechanical, engineering, civil and chemical engineering. This is necessary as only this combination is considered mechatronics, any other will mean zero functionality. [7]

Engineering is a broad field with different disciplines and some those overlaps, these are called interdisciplinary. [1]

Types of software used in the field of engineering but not limited to:

- MATLAB (Software for Numerical Computing):comprehensive software for numerical computing plus more.[9]
- ETAP (An Electrical Engineering Software for Power Systems):Power system solutions used for operating, distribution, design plus more. This include industrial, commercial, transport and transmissions sectors. [3]
- AutoCAD Electrical: Gives designers control with their creation, wiring, circuit building, and control systems changes. [6]
- LabView: A programming domain used by engineers to focus on the development, validation and computerised data collection and processing systems. [12]
- PSCAD: allows total creative freedom when building circuits, analysing results and data, all in a combine illustrative domain. [11]

Hardwares used in engineering

- **Assembly-** Hardware that is required to give a structure the means to hold its intended weight without collapsing due to fractures in the structure.
- **Electrical-** these are attachments or add-ons including but not limited to lights, cables, sensors, buzzers, pins and clamps
- **Finishing-** these are additional features that might enhance the appeal of the finished design. This might include a high-quality finish coating, suction pads or an added security feature.

This is engineering