I See You

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The notable increase in workplace injuries in industrial workshops and factories in Palestine, and the growing percentage of human lives that are lost in such environments due to non-commitment to industrial safety procedures, such as wearing masks and preventive clothes, were the basic motivations behind this project. A prototype to detect lack of safety regulations was designed using PiCamera and Raspberry Pi 4, and was dependent on AI technology. This prototype is intended to operate as smart machine. The prototype was programmed using Python language and AI algorithms. Data was collected and used for machine teaching, then exported through “TF Light” model used in the code. The camera detected age and helmet usage, If the person met all safety requirements, the machine would work, If not, the machine would produce sounds to remind the adult worker to commit to safety precautions, and would prevent them from operating any machine or equipment until they comply. Project “I SEE YOU”, was tested to ensure it produced sounds to prevent children from using harmful machines and signaling to “stay away”. It also successfully detected attire and helmets for adult workers. The prototype design could be used in places other than factories, such as homes and schools. Statistics presented at the World Conference on Occupational safety and health in 2017, estimated more than 7500 deaths, 1000 of which are due to work accidents and 6500 due to occupational diseases. Fatal accidents annually exceed 380500, with more than 374 non-fatal accidents. The total work-related deaths are estimated at 2.78 million, 86.3% of the deaths are due to occupational diseases and 13.7% are due to work accidents.

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