Case Studies using UML Lab (20CSC25)

Smart Mining Clothing

Abstract

Background: The mining industry is known worldwide for its highly risky and hazardous working environment. Technological advancement in extraction techniques for proliferation of production levels has caused further concern for safety in this industry. Research so far in the area of safety has revealed that the majority of incidents in this hazardous industry take place because of human error, the control of which would enhance safety levels in working sites to a considerable extent. Mining workers are affected by many hazards – from ventilation problems, mine flooding, gas explosions, ceiling collapsing, mine haulage, sudden inrushes and mine inundation, spontaneous combustion, to un-optimized evacuation routes. And mine operators have been working for decades to ensure no fatal accident results in death, injury, or poor health of miners. Objective: To give a solution to design smart work clothing that has sensors embedded in it to securely transmit data to managers about hazardous conditions and the workers' physical conditions, improving safety overall."

Main Features

Work clothing that has sensors embedded in it to securely transmit data to managers about hazardous conditions and the workers' physical conditions, improving safety overall

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