

## **COVID-19 Research at National Institute of Technology Silchar**

**Research Area:** Information and Communication Technologies (ICT)

**Project Title:** Development of a progressive web application for intelligent cost optimization using IOT in hotels, post COVID-19 pandemic.

**Expected Outcome:** A progressive web application (PWA) aimed at consumers and hotel owners to optimize the costs pertaining in the operations, post COVID-19 pandemic situation. Due to the imposed 40 day lockdown for the public safety, various industries are currently in loss and would be finding an optimal solution to this problem. We, in this project, will design a novel technique to monitor the variable costs viz. Electricity consumption, Water consumption, etc. and give an optimization solution for a viable operation in a hotel. The technique will be mapped through a PWA with the enterprise owner and the consumer as well, to monitor the consumption details in real time through IOT sensors. The novelty of the idea lies in the automatic transition of manual optimization to automatic using Deep Neural Networks to enhance the performance, once we have obtained a minimum amount of data. The PWA, unlike usual applications, requires a lot less resources to function.

**Expected Timeline:** 60 days or less

**Remarks:** A prototype of the PWA and related IOT hardware can be ready for the trial implementation and data acquiring within the designated timeline

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3) <https://scholar.google.co.in/citations?user=zKmR8CMAAAAJ&hl=en>

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