Assessment 1: Smart Life and Edge Cloud Technologies

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1 Introduction

1.1 Background on smart life technologies and edge cloud computing

1.1.1 Smart Life

Smart life is enabled by the intersection of the web of smart sensor embedded devices that are connected with each other and the internet **(Internet of Things) powering greater operational conveniences, increased energy efficiency, improved safety at the home.

Take for instance a smart security light that will automatically dim itself at dawn, or send a notification to a home owner when its motion sensor is triggered by movement at night.

1.1.2 Edge Cloud Computing

As the term edge suggests, this paradigm involves placing cloud resources in close proximity to where data is generated and where end users are located. The main motivation for this architecture being reducted data latency (as data is transmitted via a shorter route) and maintaining high availability of compute resources.

This is especially intsturmental in processing sensor data for IoT and Smart Life applications.

2 Exercise 1: Smart Life Technologies

2.1 Task 1: Investing in Smart Life Technologies

2.1.1 Raising Kids Smart, An Opporuntity for LifeX

Central to LifeX' mission is augmenting life through smart technologies. The X in LifeX points to the multiplicative potential of technology to enhance quality of life. and nowhere is this more needed than in the increasingly busy lives of middle class parents raising toddlers.

Now more than ever, owing to dire economic times both parents are working full time jobs and with more corporations rethinking their work from home policies - increasingly pushing for a return to full time office work, young middle class parents are turning to full time nannies to take care of their toddlers.

While the human touch of a good nanny is irreplaceable, nannies may not effectively juggle playtime and keeping track of a baby's vitals by the minute. Thus parents could do with a technological intervention to actively monitor their kid's wellbeing while they are away. Enter the LifeX Smart AI Baby Monitor

2.1.2 Lifex Smart AI Baby Monitor

Lifex Smart AI Baby Monitor is a dual device system comprising of a smart camera and a smart wristband. The smart camera mountable on a standard baby crib records footage and audio of the baby while the wearable, monitors , in the similar fashion to smart watches, the baby's vitals - heart rate, temperature, oxygen levels,etc. The two devices stay interconnected via a low power bluetooth connection. They send a stream of multimodal data(audio, visual, text) to a hosted ai model that runs analytics on the data and presents metrics to on a dashboard accessible via an app on the parents smartphone. It can also integrate with existing smart assistants present in the home to send local notifications to the nanny in case of vitals metrics threshold breaches. For instance it can trigger dimming of the smart bulb in the childs room, play lullabies on the Amazon Alexa when the baby is snoozing or crying. The parent can also talk to While the

2.1.3 Finacial Model

The Lifex Smart AI Baby Monitor starter hardware(camera and wristband) will be sold as a bundle for a one time fee of $200. Henceforth users will pay a $30 a month subscription to use the app and AI service. Partnerships with health facilities will allow LifeX to subsidize the cost for new parents with the caveat that they will allow