Title: Sense Making of Computing Technologies

Critical Resources: An internet-enabled computer with MS Word, access to myCourses.

Purpose:

The purpose of this assignment is for you to engage in a sense making activity based on reasoning with multiple forms of evidence.

Deliverables:

A write-up of your response to the instruction questions in the software of your choice. Be sure to include your name within your submission. Use the following naming convention for your file before posting:
{your_last_name}_{first_ initial}_assignment_3.doc (or docx). For example: Golen_E_ assignment_3.doc. Upload your write-up to the Assignment 3 dropbox on myCourses.

Instructions:

Making sense of new computing technologies and their maturity level is quite confusing since there is often a large divide between how these technologies are reported in popular press and among researchers. Your assignment is to present one of the following three technological areas to a decision maker at a company that wishes to move their business into an up and coming technology area.

Step 1: Choose **<u>one</u>** of these technological areas:

<u>Technology 1 - Internet of Things (IoT) Security</u>: IoT devices have become pervasive, ranging from smart home systems to medical devices. Identify the current state of IoT security in terms of how and why IoT devices are at risk and describe several key challenges that are currently being addressed or have yet to be addressed in relation to their security. **Provide a recommendation for a singular challenge that the company should consider addressing**.

<u>Technology 2 - Blockchain</u>: There is a general consensus that blockchain is a technology only used for cryptocurrency, when in fact, it can be used for many different applications. Describe what the blockchain concept actually is and several of its applications (potential or in current use) beyond cryptocurrency. **Identify a singular application that you believe the company should move forward with**.

<u>Technology 3 – 5G Deployment</u>: 5G cellular networks are almost mythical at this point in time, both in terms of what this technology will provide for cellular users and in how to deploy it. Telecommunications companies are eliciting ideas from both academia and industry for how to deploy 5G on a wide scale. Describe the current state of deployment of 5G, either globally or in the United States specifically, and provide details about the

key challenges involved with deploying it. **Identify a singular challenge that the company should consider addressing to assist in its deployment**.

Step 2: Generate a report based on the technology you chose in Step 1.

Develop a one page[1] report with your response to the technological area that you chose. Explain your reasoning as to how you came to your response. You should include 1 or 2 figures within the one page to support your response (be sure to give all figures a caption and refer to the figures in the text using the figure's number). If need be, you can add supplementary evidence appendix pages after your 1-page main report. You must cite all sources used (your bibliography does not count towards the 1-page limit) and draw upon at least 4 different sources (at least two sources must be peer reviewed articles from 2017 or later and at least two sources must be from popular press articles from 2017 or later) to support your report. *Your bibliography and citations should be in IEEE format.*

Remember, you are creating this report for a decision maker who is busy and does not have time to read lots of text. Clear, direct, succinct writing backed by solid reasoning is better than lots of text that is hard to follow.

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[1] 1 page is defined as 12-point font, 1.5 lines spacing, 1" margins.