

***EE/CprE/SE 491 WEEKLY REPORT 8***

***April 3, 2023 – April 9, 2023***

***Group number: sddec23-19***

***Project title: Bluetooth-Enabled Ingestible Capsule to Monitor Gut Activity***

***Client &/Advisor: Santosh Pandey***

***Team Members/Role: Chase Thompson, Cutler Thayer, Tucker Thomas, Robert Zukowski***

○ **Weekly Summary**

This week we met with our advisor to discuss progress and future plans.

○ **Past week accomplishments**

- **Chase Thompson:** Did generalized research into image processing this week. Unfortunately I was unable to dedicate much time to the project this week so not much progress to report.
- **Robert Zukowski:** I read the paper: “A Wireless Capsule Endoscopy System with In-Vivo Data Transmission and Energy Harvesting” relating to capsules that transmit data without internal batteries or microcontrollers, saving significant amounts of space.
- **Cutler Thayer:** Started reading up on algorithms to sort image banks and tested the code from those repositories on my computer. Trying to look through to see if I can learn more about the specifics of how this code works.
- **Tucker Thomas:** Compared scholarly articles for design inspiration. Determined some key design implementations such as image preprocessing and power consumption testing.

○ **Individual contributions**

<b><u>NAME</u></b>	<b><u>Individual Contributions</u></b>	<b><u>Hours this week</u></b>	<b><u>HOURS cumulative</u></b>
Chase Thompson	Researched image processing algorithms and how we would apply these algorithms to our project.	1	18
Robert Zukowski	Read mentioned paper	2	19
Cutler Thayer	Tested code to sort image banks based on various medical issues	3	19
Tucker Thomas	Compared existing solutions and their testing methods.	3	18

○ **Plans for the upcoming week**

- All Team Members: Read the attached article about [already existing companies that are prevalent in this field](#).
- Chase Thompson: Do further research on image processing algorithms.
- Robert Zukowski: Email grad students to set up meetings and discuss circuits/code that has already been done and gain a new perspective on the project.
- Cutler Thayer: See if I can apply this code to a different application to apply this knowledge to something.
- Tucker Thomas: Gather materials from graduate student.