**Person 1**

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Greetings, everyone. I am Sarvesh Prabhu; I am excited to be here with my fellow members of Lambert HOSA, Carter, Dakshin, and Ishan. I want to share an innovative idea that we have been working on for several months called “**A non-invasive approach to gut health & gastrointestinal diagnosis**”. This will be a breakthrough in the gastroenterology industry.

According to the studies, 1 in 5 patients experiences a gastrointestinal disorder during their lifetime. This results in symptoms like cramping, abdominal pain, bloating, gas, diarrhea, or constipation.

When the pain is severe and unbearable, we need to go to the emergency. The ER doctor orders a gastro procedure to be done. Diagnosing gut disorders and gastrointestinal tract is essential as the symptoms could lead to lactose intolerance, chronic diseases, or life-threatening colon cancer.

You all know what that means; its “**Colonoscopy**”. Imagine, I am already in severe pain, and the last thing I need is a highly invasive wired camera poking into my digestive system.

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**Person 2**

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Our solution is “Parva Capsula”, as simple as swallowing a **“Smart Pill”**.

This will be a swallowable capsule with an IoT sensor and a micro camera, replacing the traditional highly invasive colonoscopy and endoscopy procedures.

The smart pill is the size of a vitamin pill that contains an IoT sensor, a micro camera, onboard diagnostics tools, and runs on state-of-the-art nanotechnology.

The onboard diagnostics tools utilize the sensor to detect the presence of hydrogen, carbon dioxide, and oxygen in the gut.

Additionally, the micro camera takes several pictures and short videos and sends them to the paired Bluetooth device before swallowing the capsule.

Our neutral network-powered deep learning algorithm further analyzes the images and videos outlining potential inflammation, cancer symptoms, ulcerative colitis, food fermentation in the gut or microbiome activity.

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**Person 3**

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Now, let us look into our technology. Our Smart Pill is containing hi-def camera and biosensors for pH and gas analysis. It is powered by a single 3mm internal silver-oxide battery and nano technology. The smart pill transmits data wirelessly to a Bluetooth-enabled smartphone or computer.

The pill takes about the same time to move through the digestive system as food — 24 to 48 hours.

In addition to the onboard IoT diagnostic sensors, our application uses machine learning algorithms such as scale-invariant feature transform and Principal Component Analysis for image classification and detecting potential dieses.

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**Person 4**

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Our smart pills are swallowable capsule that will replace the highly invasive traditional colonoscopy and endoscopy procedures. What a relief. The opportunities are endless we are barely scratching the surface. We wanted to demonstrate success in the Gastro industry and will expand to support other industries as well.

My friends and I have learned a lot about the medical industry, the niche market in gastroenterology, and productional’zing this product. I hope you enjoyed it as much as we did.

Thank you for the opportunity to speak to you.

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