

# Prototype for Improved CT Scanner Alignment System

## The Problem

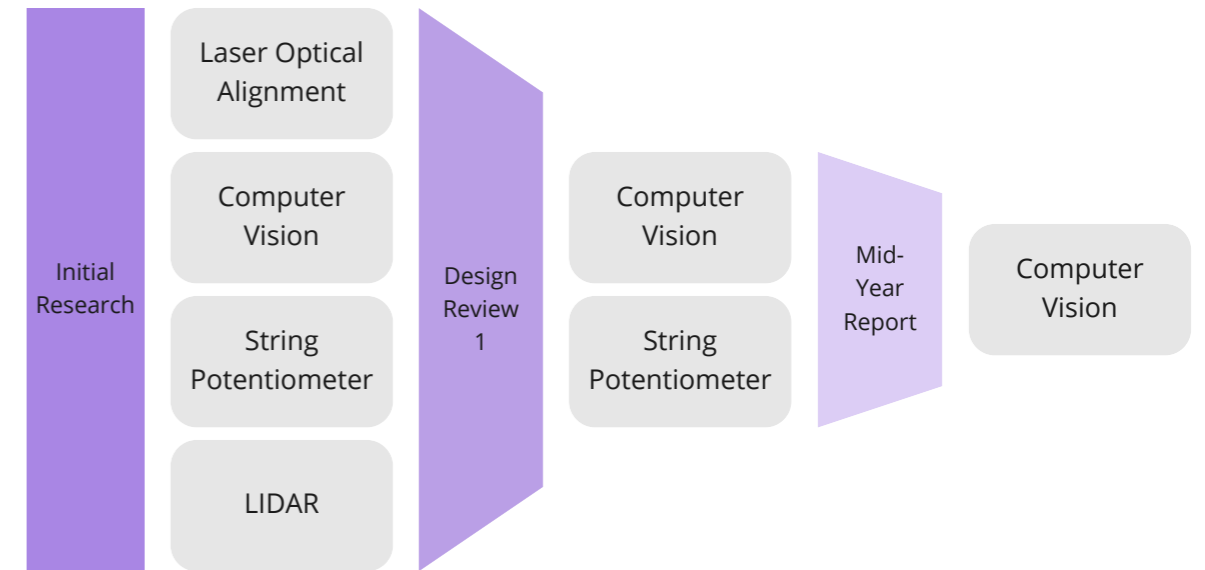
GE Healthcare (GEHC) is a global leader in the production of Computed Tomography (CT) machines and desires to meet even higher standards for the installation alignment of their machines.

**This year's SCOPE project helped improve image quality by creating a tool or process that will allow CT scanner installation technicians to achieve increased alignment precision.**



## Product Research

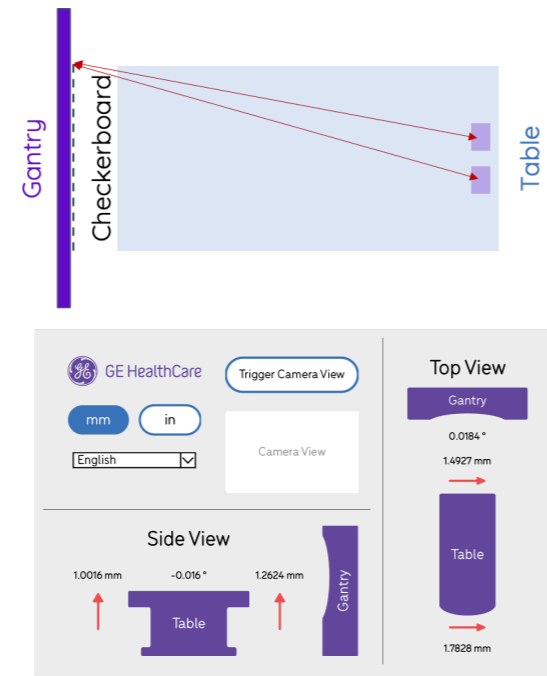
Our first semester we spent our time researching possible solutions to the problem and using different comparison methods to choose the best possible option.



## Product Development

Our setup has two cameras mounted on the table facing a checkerboard on the gantry. We created a program for locating the relative position of the table to the gantry using the inputs from the two cameras.

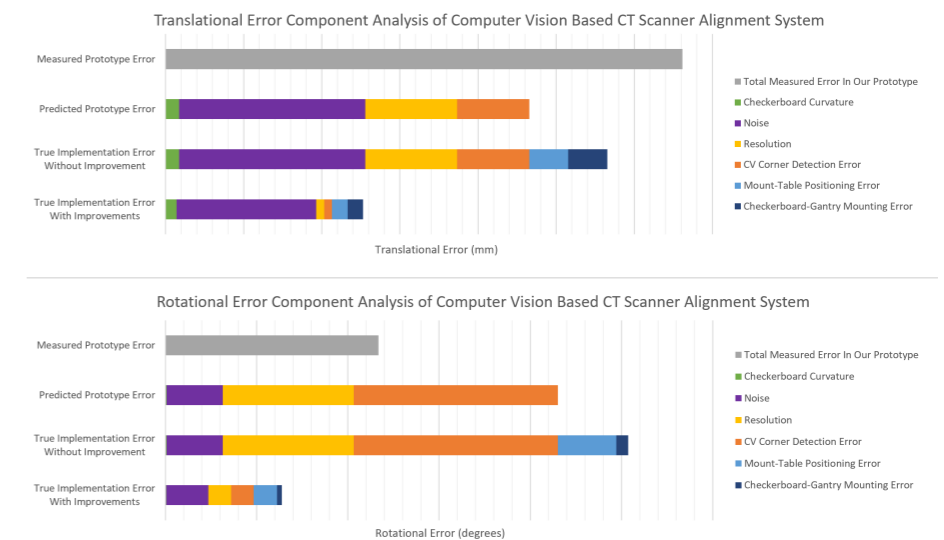
With this calculated position we output directions into a User Interface for technicians to help move the table.



## So What

**With the System Error Source Analysis shown on the right, we have given GE Healthcare (GEHC) a full breakdown of what the paths for the future of this system are.**

**By using this system on actual CT Scanners, GE Healthcare (GEHC) will be able to achieve the increased precision in alignment that they seek.**



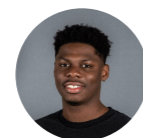
## Team



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