

# Progress Report: Handling Structural Inconsistencies in CT Image Reconstructions

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## 1 Overview

This is a progress report for a Computer Science Honours project related to mesh reconstructions from CT image stacks. I will recap the most relevant content of my project proposal and literature survey, and describe my progress in investigating improvements on prior methods. I will also take this opportunity to discuss techniques yet to be investigated and my rationale for them. Finally I will outline my goals and schedule for the remainder of the year.

## 2 Introduction

Medical imaging modalities such as CT scans and MRI produce stacks of images depicting regions of different tissue. These image stacks can be used to reconstruct the 3D structure of internal organs. The renders or models produced are useful in diagnosis, treatment, education, surgical simulation, and robot assisted surgery [?, ?]. The process of producing renders or reconstructions can be improved by reducing manual user input, improving reconstruction accuracy, or improving computational efficiency.

Branching structures can be problematic to reconstruct and are a common issue in prior methods. My project aims to improve the accuracy of reconstructions involving branches and other problematic structures.

## 3 Background

Background...

## **4 Progress**

Progress...

## **5 Future**

Future...