Compare (advantages and disadvantages) the Algebraic Reconstruction and Radon Transform techniques.

**Algebraic Reconstruction**

* Simple, and intuitive
* Has low computational cost

On the other hand:

* It makes assumptions on the attenuation coefficients (ui)
* It assumes linearity, the amount of attenuation of each X-ray beam can be formulated as a set of linear equations.
* it does not have a closed-form solution
* It could require a threshold to stop the iterative process

**Radon Transform**

it is a mathematical technique and a rigorous approach; it offers a unique solution to find the X-ray attenuation in tissue.

It has analytical properties like scaling.

The Radon transform is robust to noise

It could be implemented in a parallel computing infrastructure

Cons of Radon Transform

* It assumes that data is projected along straight lines
* It could be computationally intensive
* With limited or noisy data, it could introduce artifacts