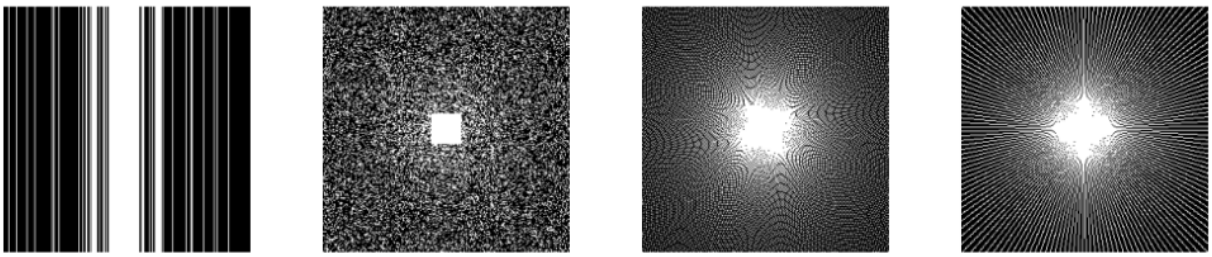
Checkpoint - April 11th 2024

Progress

Masks

I've seen that Emiel used multiple types of masks in his thesis and I'll also do it like that.



(a) (b) (c) (d)

Figure 4.2: Illustration of the different types of sampling masks used in the evaluation of the models: Cartesian (a), random (b), spiral (c), and radial (d).

Sampling Mask Type	Sampling Rates	Number of Masks Studied
Cartesian	20%, 30%, 40%	3
Random	20%, 30%, 40%, 50%	4
Spiral	16%, 33%	2
Radial	32%	1

Table 4.2: Overview of the different sampling masks and their sampling rates considered in this thesis.

Dataset

- Downloaded and extracted IXI dataset with T1 and T2 contrasting.
- MRI images have 256 slices in 3 axis. FastMRI only has images from above and slices are above eyes. So I've extracted from each file 16 slices above eyes. Mostly from slice 140 to 255. Saved them in h5 format.
- I've also saved them in k-space format.
- Images are different dimensions:
    - fastMRI:
        - T1 - 256x320
        - T2 - 288x384
    - IXI:
        - all images are 256x256

Problem

- It doesn't contain multicoil data which is needed for E2E VarNet training.
- Since we don't have multicoil data I can't use DataLoader which fastMRI provided.

Other

- Tea sent me today GitHub repository with tools for training with both fastMRI and IXI datasets https://github.com/yilmazkorkmaz1/SSDiffRecon