

Dr. Vibujithan Vigneshwaran

After earning my Bachelor's degree in Engineering from Sri Lanka, my passion for medical imaging led me to pursue a PhD at the University of Auckland in New Zealand. There, I specialized in developing image-processing techniques for analyzing microscopy images of the heart. With a penchant for exploration, I later embarked on a journey to delve into another corner of the globe. I am currently a postdoctoral fellow at the MIP lab, where my focus lies in developing AI techniques to decipher healthy brain aging and detect pathological changes.

Lunch & Learn Topic:

Opening the blackbox of AI for medical imaging

AI techniques are often seen as black boxes because they are hard to explain. While this might not be a big concern in some areas, explainability is crucial in medical field. That is why my research focuses on creating explainable AI models for medical images. These models can also answer hypothetical questions like "What if?" For instance, we can ask the model how someone's brain might change as they age. This feature, known as counterfactuals, assists us in pinpointing brain regions affected by either healthy aging or diseases, thereby facilitating both diagnosis and treatment planning.