

Cover Letter

Vikas Thamizharasan

The paramount step in creating Artificial Intelligence is to teach computers to understand our world as intuitively as humans do. This dream is rapidly transforming into reality with the advancements in Computer Vision (CV), Machine Learning (ML), Natural Language Processing (NLP) and Computer Graphics, and in some cases outperforming human capabilities. It is my dream to be an integral part of this change.

My interests lie in the intersection of **Computer Vision, Computer Graphics and Deep Learning**.

- I wish to tackle problems on the theoretical realm specifically generative models (primarily GANs), unsupervised learning (specifically disentangled representation learning), geometric deep learning, learning shape and texture representation of 3d data, discrete differential geometry

- and in the applied realm specifically building parameteric models for shape estimation, 3D reconstruction, differentiable rendering, neural rendering, PBR, image-based modelling and rendering, style transfer, vision as inverse graphics, AI for creative content.

I am passionate about building intelligent machines that can reason and understand the natural world and create products that work, are built on novel techniques (for some people this may be indistinguishable from magic) and aids users in their endeavors.. I want to develop products that make the world a better place and bring joy to the users.

I believe Argo AI is the right place for me to pursue my dreams. I am also excited to be part of a collaborative environment where researchers, engineers and designers from various backgrounds work together to solve challenging problems.

It would be an honour for me to be able to work with a team at Argo AI for the Summer of 2021. My experience and skill set developed over the years (*detailed in my resume*) makes me confident to take up this challenge.