NOTICE OF INTENT

JOSHUA GEORGE

Partial differential equations (PDEs) play a prominent role in many disciplines such as applied mathematics, physics, chemistry, material science, computer science, etc. Elementary methods to solve PDEs generally involve reducing the PDE to an ODE and solving it, but in general, PDEs are usually hard to solve as the solution spaces tend to be infinite-dimensional and there's a mixture of boundary and additional time, velocity-dependent conditions. However, recent advances in Machine Learning help us to solve/ approximate PDEs using machine learning techniques. In this project, I tend to explore the topic - Approximation of partial differential equations with a data-driven approach using Neural Networks.

Date: January 23, 2023.