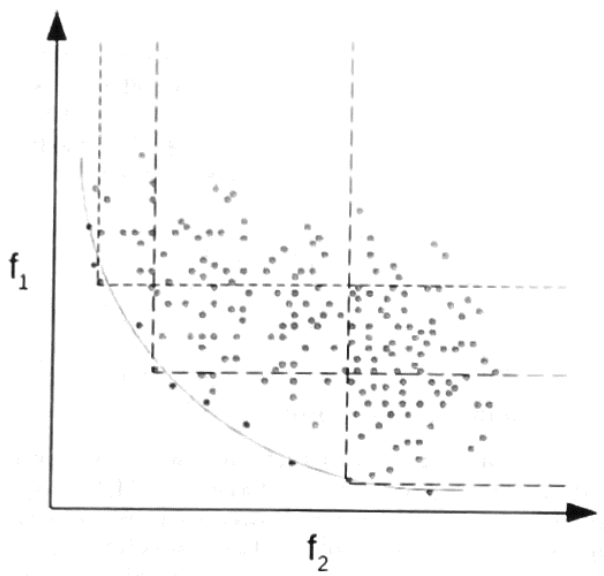

Figure 3: Two dimensional optimisation problem. The red line denotes the Pareto front of the problem, with the red dots showing non-dominated, Pareto optimal solutions. The black dotted lines and shaded area show the area of objective function space which is dominated by the solutions at the origin of the line, note that this is only shown for a subset of the non-dominated points for clarity

caption?

2.3.2 LEMONADE and NSGA-Net

A common secondary objective function in NAS or hyper-parameter optimisation after performance is model complexity. For applications in embedded systems or other computational limited environments, the complexity of the network can be an important factor. However, there are a number of metrics by which model complexity can be evaluated, such as, inference time, active network nodes, the number of model parameters or FLOPs (floating point calculations) in a forward pass of the network [37]. LEMONADE [34] is multi-objective system which uses the model parameters as a measurement of complexity and leverage's the cheap evaluation cost in the selection process.

This method uses Kernel Density Estimation (KDE) to build a distribution of networks with respect to complexity to select candidates for reproduction in

What is KDE?