Bayesian Neural Networks

Pushpalatha C. Bhat\textsuperscript{1}, Harrison B. Prosper\textsuperscript{2}
\textsuperscript{1}Fermi National Accelerator Laboratory, Batavia, Illinois, USA
\textsuperscript{2}Florida State University, Tallahassee, Florida, USA

Abstract

The training of neural networks can be viewed as a problem of inference, which can be addressed from a Bayesian viewpoint. This perspective leads to a method, new to the field of particle physics, called Bayesian neural networks (BNN). We give a brief overview of the method and we illustrate how it can be usefully deployed in particle physics research.