Presentation Outline

Outline of the Presentation

1. Introduction
    a. Outline of the project
    b. Overview of the presentation
2. Astronomical background
    a. GWs – brief talk about what they are and how they are produced
    b. BBH mergers
    c. Types of parameters we are looking at
    d. Waveform modelling
    e. LIGO, LISA etc.
3. Machine Learning background
    a. Overview of ML – supervised vs unsupervised, loss functions, parameter estimation
    b. Introducing NNs, NFs, MAFs etc.
    c. Talk about NRE, TMNRE, NPE, SNPE
    d. Embedding nets and the data challenge of efficient posterior estimation
4. Aim of the Project
    a. What peregrine actually does
    b. What SNPE is planning to replace
    c. What do we want to see
5. Results produced
    a. Technical challenges
    b. The SBI library
    c. Posteriors produced – show plots
    d. Future results to mention – joint marginal posteriors, posteriors from real GW events, comparisons to peregrine TMNRE posteriors
6. Evaluation and conclusion
    a. Compare to TMNRE in terms of accuracy, efficiency etc.
    b. Use in LISA etc.