William L. Sutcliffe — CV

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Nationality : British D.O.B: April 9 1990

Education

Imperial College London & CERN, UK and Switzerland
PhD. High Energy Physics *10/2012–09/2016*
- PhD Research led to a publication in a top journal, Nature physics.

Imperial College London, UK
First Class (MSci) Physics with Theoretical Physics (84.7%) *10/2008–06/2012*
- Awarded Ken Allen Prize for academic excellence (2009).

Experience

University of Bonn Germany
Researcher *03/2019–present*
- researching the efficacy of graph neural networks in pytorch for reconstructing particle decays.
- lead the semileptonic physics group of the Belle II experiment consisting of around 60 members.
- lectured and prepared problems for courses covering statistical data analysis and machine learning.

Karlsruhe Institute of Technology Germany
Posdoctoral researcher and Humboldt Research Fellow *10/2017–01/2019*
- responsible for development of an algorithm using over 200 xgboost BDTs to reconstruct B particle decays.
- awarded a prestigious research fellowship by the Alexander Von Humboldt foundation.
- implemented binned maximum likelihood fitting framework in python used in several publications.

Goldman Sachs London, UK
Associate in Model Risk Management *11/2016–07/2017*
- validated liquidity models including data analysis (SQL) and visualization of OTC derivatives cashflows.

Imperial College London and CERN, UK and Switzerland
PhD research *10/2012–10/2016*
- performed statistical data analysis on large amounts of LHC collision data at CERN using C++ and python.

Technical skills

Programming: Python, C++, SQL **Libs:** numpy, pandas, sklearn, tensorflow, pytorch, opencv
Tools: git, LaTeX, pycharm, jupyter **OS:** Linux, Mac, Windows
ML: Coursera deep learning and machine learning specialisations. TUDresden DL Hackathon (2019)
DL architectures: NNs, CNNs, GANS, RNNs, GCNs, Transformers

Personal projects and other hobbies

Projects: https://github.com/willsutcliffe
- streamlit multi-language translation app using a trained from scratch transformer in pytorch.
- streamlit Japanese and Cyrillic character app using CNNs and GANs in pytorch
- BDT & neural net London property price prediction with scraped data with a 1% error.
- bitcoin trading strategy using tweet sentiment from a fine-tuned huggingface BERT model.

Languages:
- Keen language learner: fluent in German and a working knowledge of Russian and French