

**MSc Data Science Project**

**7PAM2002-0509-2023**

Department of Physics Astronomy and Mathematics

**Data Science Final Project Report**

**Project Title:**

Forecast Stock Market Trends and Portfolio  
Optimization Using Neural Networks and Machine  
Learning Algorithms.

**Student Name and SRN:**

Venkata Naga Sai Sasidhar Pasarlaputi [21063192]

**Supervisor:** Ralf Napiwotzki

**Date Submitted:** 29 August 2024

**Word Count:** Enter word count

## Declaration Statement

This report is submitted in partial fulfilment of the requirement for the degree of Master of Science in Data Science at the University of Hertfordshire.

I have read the guidance to students on academic integrity misconduct and plagiarism information at Assessment Offences and Academic Misconduct and understand the University process of dealing with suspected cases of academic misconduct and the possible penalties which could include failing the project module or course.

I certify that the work submitted is my own and that any material derived or quoted from published or unpublished work of other persons has been duly acknowledged. (Ref. UPR AS/C/6.1 section 7 and UPR AS/C/5 section 3.6). I have not used chatGPT or any other generative AI tool to write the report or code (other than where declared or referenced).

I did not use human participants or undertake a survey in my MSc Project.

I hereby give permission for the report to be made available on module websites provided the source is acknowledged.

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**UNIVERSITY OF HERTFORDSHIRE**  
**SCHOOL OF PHYSICS ENGINEERING AND COMPUTER SCIENCE**