National College of Ireland

Configuration Manual

MSc Research Project
Data Analytics

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Project Submission Sheet
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Configuration Manual

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1 Introduction

This manual provides step-by-step instructions for setting up and configuring the VAE-LSTM project. This system is designed for advanced data modeling using the power of Variational Autoencoders (VAE) and Long Short-Term Memory (LSTM) networks. It's optimized for high-performance data processing and predictive analytics.

2 System Requirements

Hardware:

Minimum: CPU: Dual-core 2.5 GHz RAM: 8 GB Disk Space: 5 GB Recommended: CPU: Quad-core 3.5 GHz or better RAM: 16 GB or more Disk Space: 10 GB GPU: NVIDIA or AMD with at least 4 GB VRAM (for accelerated computation) Software:

Operating System: Linux (Ubuntu 18.04 or higher recommended), macOS, or Windows. Python 3.8 or higher Your second section. Change the header and label to something appropriate.

3 Installation Process

Open the provided .py file in Anaconda or Google colab or system installed python

4 Dependencies

This project relies on several Python libraries, including: TensorFlow or PyTorch (depending on your implementation) NumPy Pandas scikit-learn All dependencies can be installed using the provided requirements.txt file.

5 Troubleshooting

Error: "Failed to load data." Solution: Ensure that the path in DATA_PATH is correct and that you have read permissions for the data files. Issue: Slow training times. Solution: Consider using a machine with a compatible GPU. Ensure GPU drivers are up-to-date and that TensorFlow or PyTorch is correctly set up to use GPU acceleration.

6 Conclusion

Thank you for utilizing the VAE-LSTM project. Committed to enhancing its capabilities, and your feedback is instrumental for its growth. Please don't hesitate to reach out with any questions or recommendations.