Time-series Foundation Models (TSFMs) in finance - refined dissertation proposal

1. **Introduction**
   1. **Context and Motivation:** Explaining the importance of time-series forecasting in Finance
   2. **Problem Statement:** 
      1. Limitation of traditional time-series forecasting methods and the need for more advanced models
      2. Lack of research on TSFMs in Finance
   3. **Objective of the dissertation:** Figuring out if TSFMs are any good in Finance, and how they compare to traditional time-series forecasting models
2. **Background / Related work**
   1. **Brief overview of of traditional forecasting methods:**
      1. ARIMA
      2. XGBoost
      3. DeepAR
      4. Etc…
   2. **Emergence of TSFMs**
   3. **Related work:** Summary of key research studies so far that have compared TSFMs (I think there is only 1 or 2)
3. **Literature review**
   1. **Discussion of literature around TSFMs**
   2. **Discussion of literature around traditional models**
   3. **Discussion of literature around experiment design and evaluation metrics**
   4. **Gaps in the current state of research**
4. **Models**
   1. **Describing TSFMs I will be using (Lag-llama and TimeGPT) In detail:**
      1. Architecture
      2. Underlying principles
      3. Other details
5. **Experimental setup**
   1. **Experiment design and performance metrics**
   2. **Describing the Data:**
      1. Sources
      2. Characteristics of different data
      3. Different Features of data
   3. **Training, testing, potential finetuning:** Outlining the process of training and testing the models
   4. **Implementation details**
      1. Software
      2. Libraries
      3. Code
      4. Etc…
   5. **(potential) Hyperparameter tuning**
6. **Results**
   1. **Presenting the quantitative results in a graphical manner**
   2. **Qualitative analysis of the results:** Providing insight into the results and discuss any interesting patterns or findings
7. **Discussion**
   1. **Discussing how TSFMs compare against traditional models**
   2. **Analysing Strengths and weaknesses of TSFMs**
   3. **Real-world implications**
   4. **Limitations**
8. **Conclusion**
   1. **Summary of findings**
   2. **Contribution to science**
   3. **Future work**
   4. **Final thoughts**