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| Today, I first worked on fixing the error in the Autoencoder algorithm from yesterday. By identifying the source of the error, I made the necessary corrections and ensured that the algorithm responded more accurately in anomaly detection. During the work, when I divided the data into 6-hour intervals, I noticed that the results were not at the desired accuracy, so I updated the system to analyze data in 2-hour time intervals. This increased both the accuracy of anomaly detection and the clarity and meaningfulness of the graphs.  Today, I worked on designing an autonomous system capable of detecting anomalies from sensor data. First, I investigated how the data would be transferred to the main computer and how potential “gray areas” in this data could be identified using the Autoencoder. Then, I examined the feasibility of using LLM models with 13B–30B parameters on a powerful computer like an RTX 4090 to interpret these gray areas and researched various open-source LLM models. To allow the system to make more contextual decisions, I learned how the RAG (Retrieval-Augmented Generation) method could be integrated with historical data and technical documents. Additionally, I focused on prompt engineering to properly guide the model and saw that using these methods together could significantly improve system performance. At the end of the day, I concluded that the combination of Autoencoder + LLM + RAG + prompt engineering, along with a proper sensor data flow design, would provide a strong foundation for the project. | | | |
| **Sayfa No** | **Çalışmanın** | | **KONTROL** |
|  | Konusu :.........................................  ......................................................... | Yapıldığı Tarih  ...../..../202.. | ......................................  ...................................... |