## CLIP - SEARCH PROPERTIES IN DIGITAL ASSETS

Authors Ahmad Alkhaldi, Igli Balla, Rahma El Bouazzaoui, Tirthendu Prosad Chakravorty

## **PROJECT DESCRIPTION**

AILiveSim Asset Fetcher used to retrieve synthetic 3D assets using natural language inside AILiveSim simulation solution. It also offers asset masking and generation capabilities based on user prompts.





## APPROACH

CLIP encodes each asset into a latent vector stored in the asset database. These vectors enable natural language retrieval, as CLIP provides textimage aligned embeddings. Each user prompts will be parsed to retrieve objects and properties that facilitate the object search and retreival process.



## CLIP

Image Encoding and Text Encoding to generate similarity calculation and



LLM BERT and LLAMA trained for NER tagging and Rule-based sentence

Training and Validation Loss Over Time								
05-								<ul> <li>Training Loss</li> <li>Validation Loss</li> </ul>
0.5								
0.4 -								
0.3 - SSO								
0.2 -								



