Trajectory Prediction

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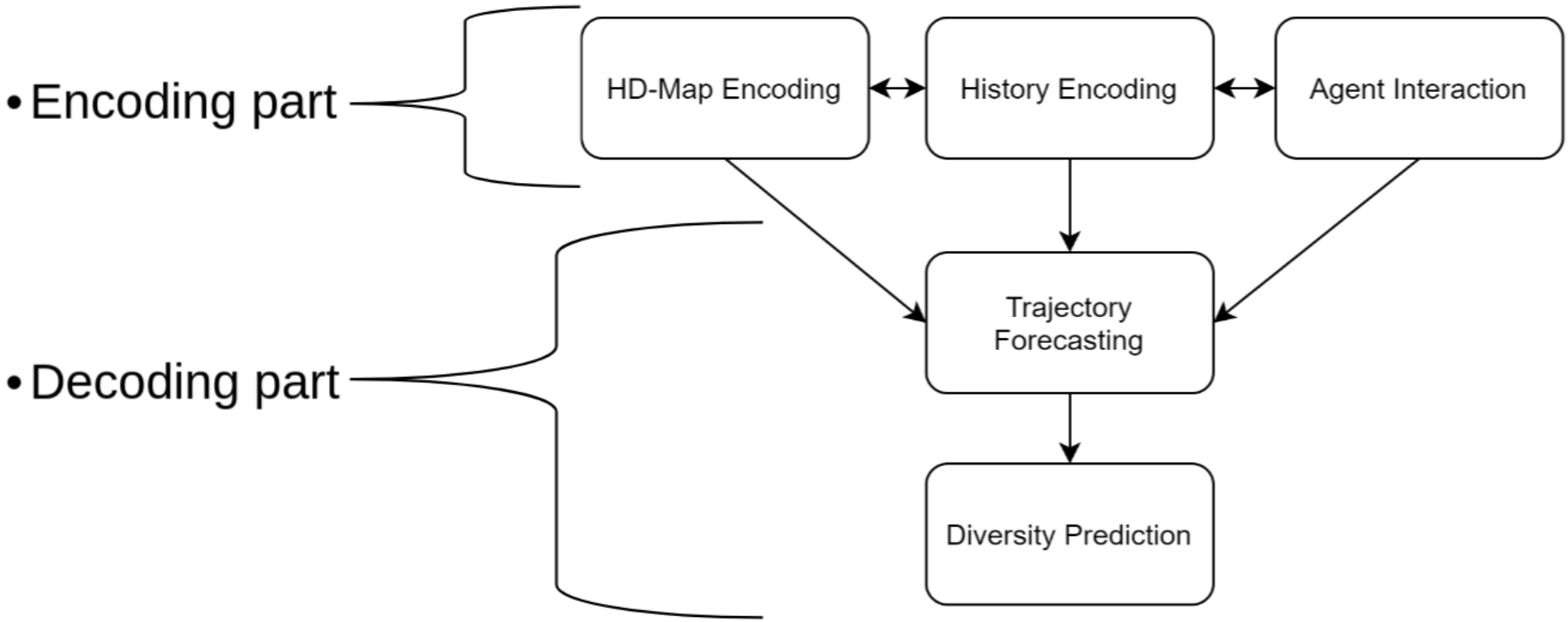
Pipeline for Trajectory Prediction



Metrics for Evaluation

We evaluate two metrics for each scale:

- Average Displacement Error (ADE): The average L2 distance between the predicted trajectories and the ground truth
- Final Displacement Error (FDE): The average L2 distance between the endpoint of the predicted trajectories and the ground truth

Proposed solution

- Based on Convolutional neural network
- Augmentation: rotation, shifts
- 2D Convolution on neighbours
- Variation of train/test split

Future works

- Use Graph Convolutional Networks for trajectory prediction
  - AVGCN: Trajectory Prediction using Graph Convolutional Networks Guided by Human Attention // https://arxiv.org/abs/2101.05682
- Use end-to-end models
  - MP3: A Unified Model to Map, Perceive, Predict and Plan // https://arxiv.org/pdf/2101.06806.pdf