Practical Course AI
Status Sprint 1

2020/11/09 - Team 2

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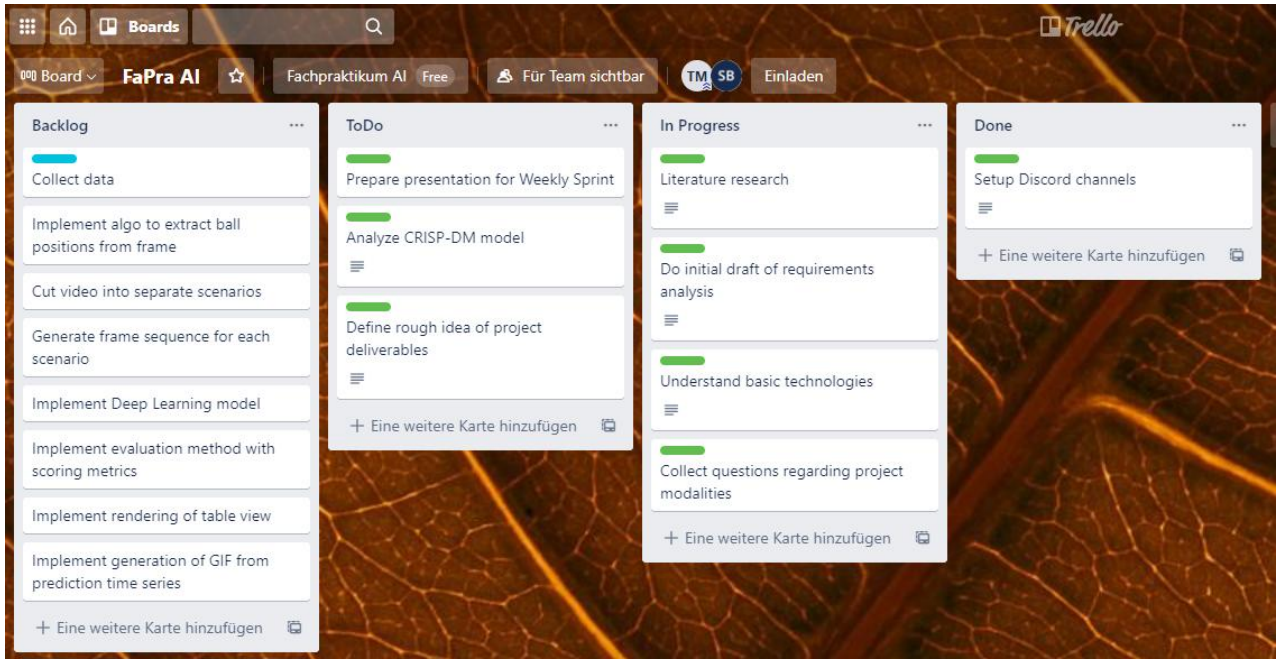
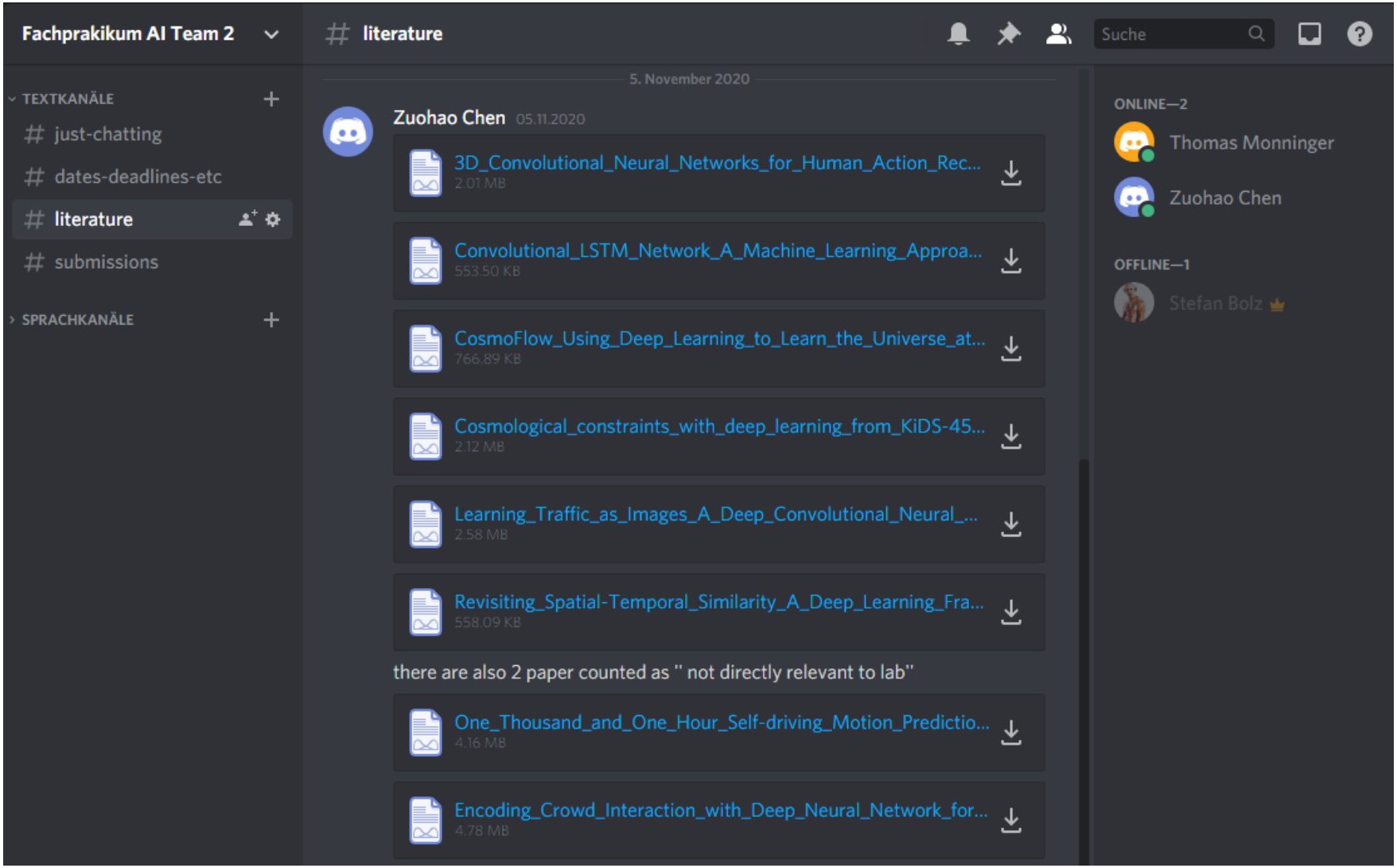
Configuration of Trello Board (TM)

- Trello board created and team onboarding
- Columns: Backlog – ToDo – In Progress – Done
- Colored Labels to indicate sprint assignment



Setup Discord Channels (SB)



Research & Questions (ZC)

- Understand basic technologies (DL, CNN, RNN)
- Review provided literature
- Collect questions regarding project modalities

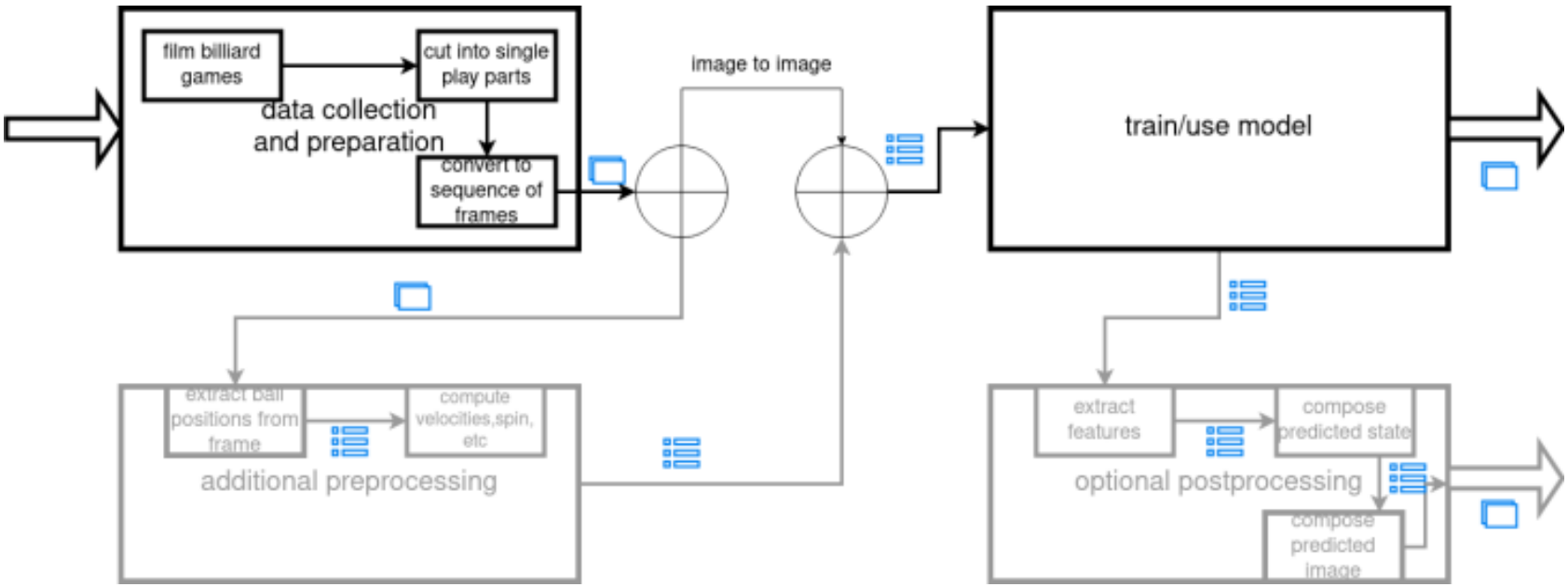
Input/Output

- Input 1: Position for 16 balls [6x16] (zeros for balls in pockets)
- Input 2: Stick position [6x1]
- Input 3: Stick angle [1x1]
- Output 1: Position difference x,y for 16 balls [2x16] (position invariance)
- What kind of input(after preprocessing) do we need to use? Position of balls in x-axis/y-axis/time or just frames of the video?
- As for output: final state picture of the table or every single position of balls?

Model Architecture

- A baseline model shall be implemented (SVM, Random Forrest)
- A deep learning model shall be implemented (Transformer, Conv-LSTM)
- A recurrent neural network shall be implemented to process the time series
- As recurrent cell, an LSMT layer shall be used with 64 hidden units
- Do we need to embed the model into some physical theorem?

Sketch Process and Data Flow (SB)



Initial Draft of Requirements Analysis (TM)

Practical Course “Artificial Intelligence”
Requirements Analysis

Team 2: Thomas Monninger, Stefan Bolz, Zuohao Chen