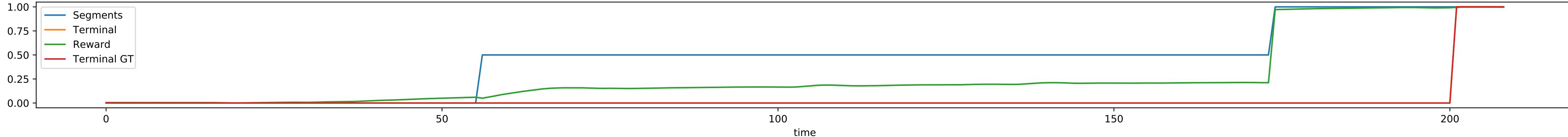
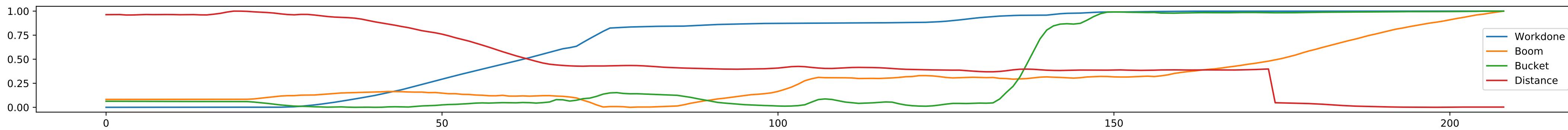
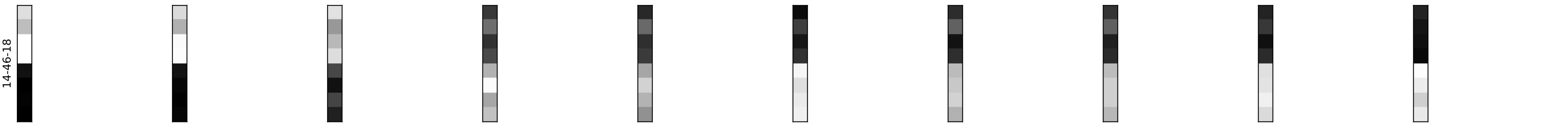
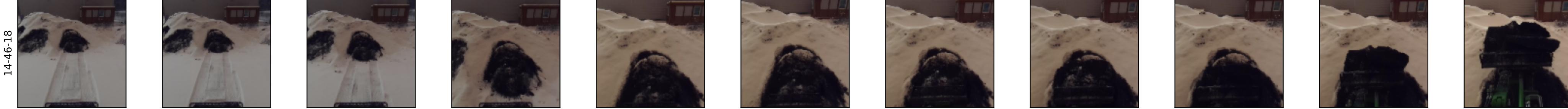


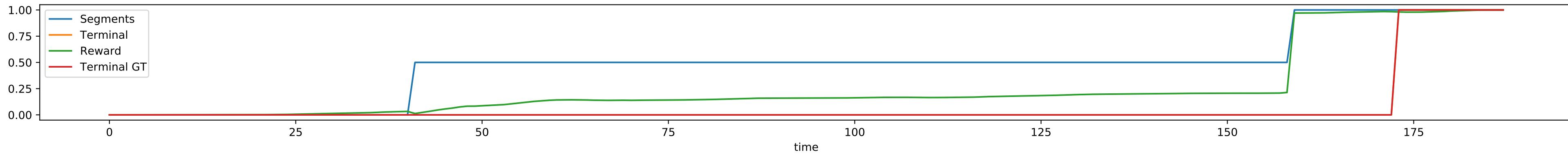
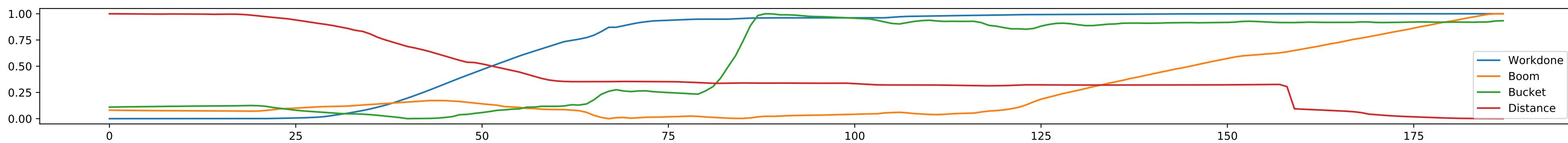
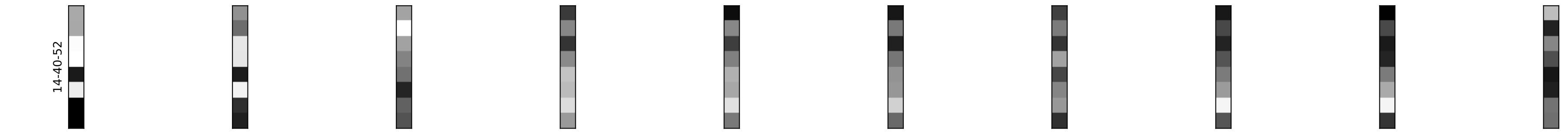
Learning Reward from Demonstrations \w sensors+vision (R_max = 600)

Training Data		Sensor Values	Clustering & Classification	Reward
80 % of positive demos: mix of winter and autumn	Boom angle, Bucket angle, Distance to the pile, Segment, Reward	20 % of positive demos: mix of winter and autumn	Difference R_max and Distance to the next cluster center	K-means clustering and KNN Classifier

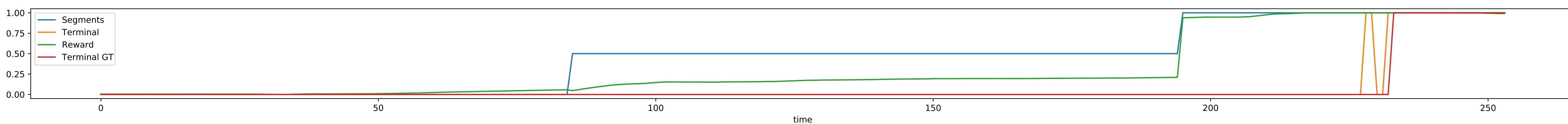
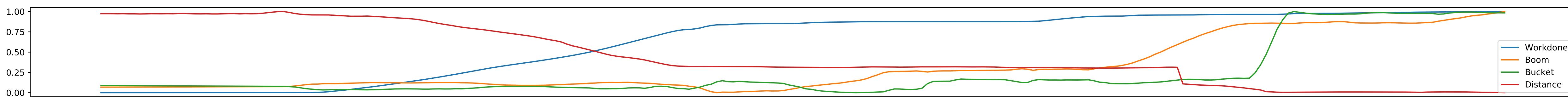
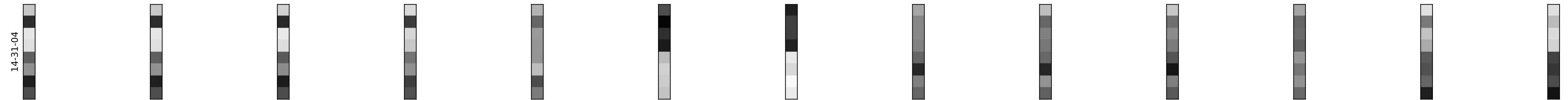
winter - 14-46-18



winter - 14-40-52

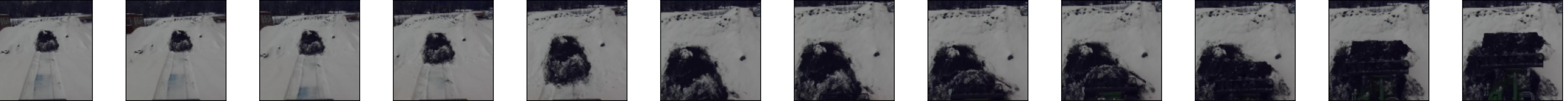


winter - 14-31-04

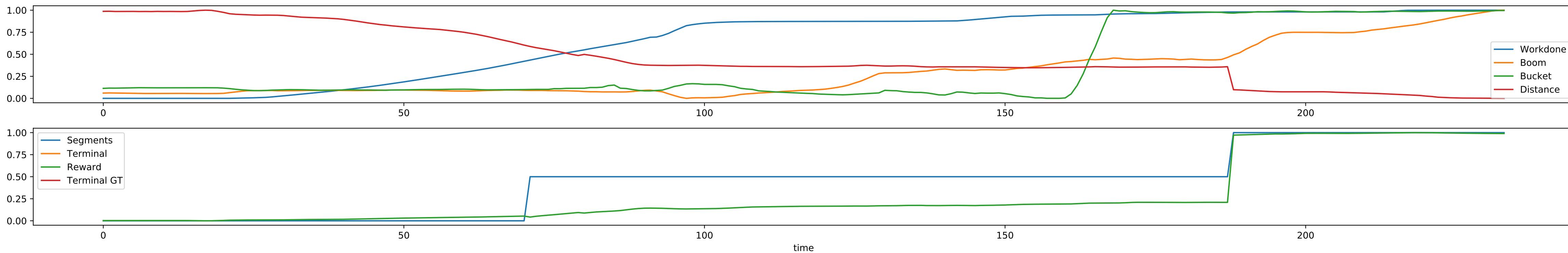


winter - 14-28-58

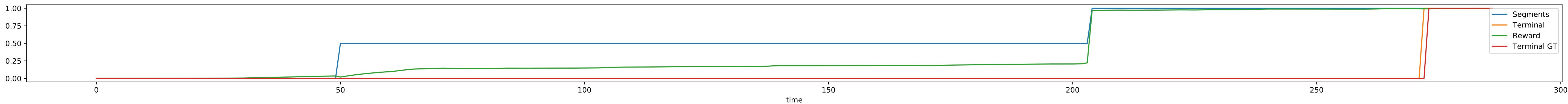
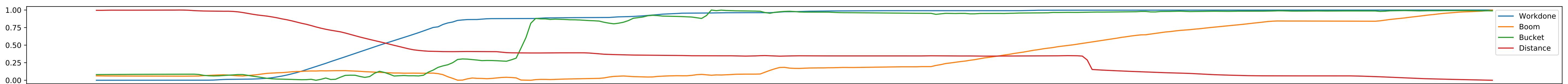
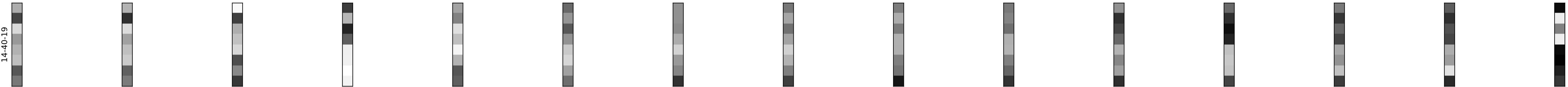
14-28-58



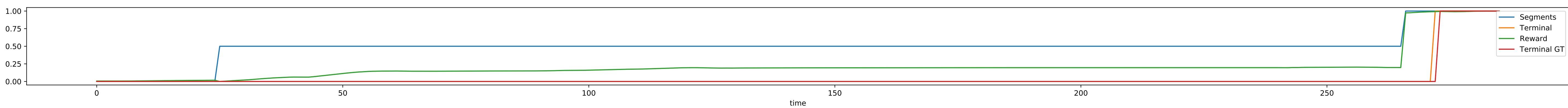
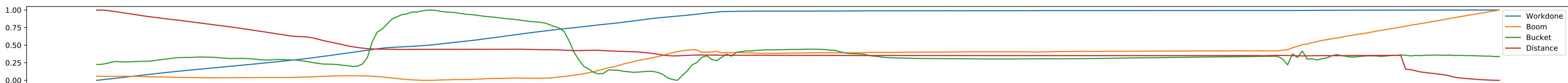
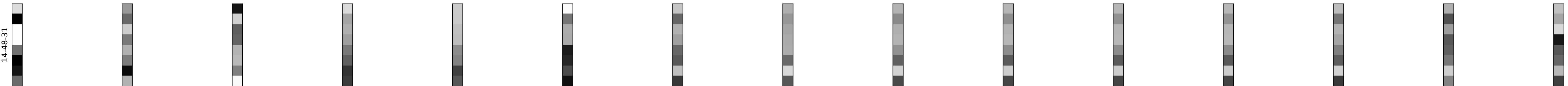
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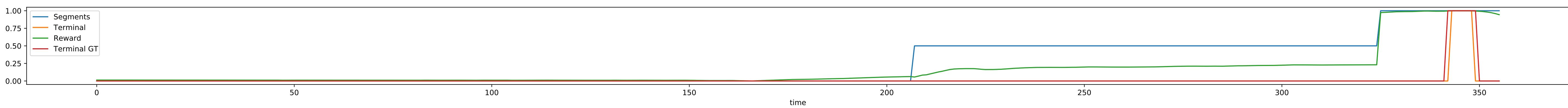
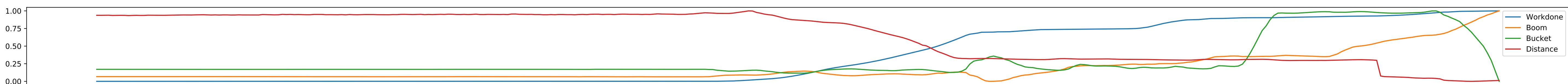
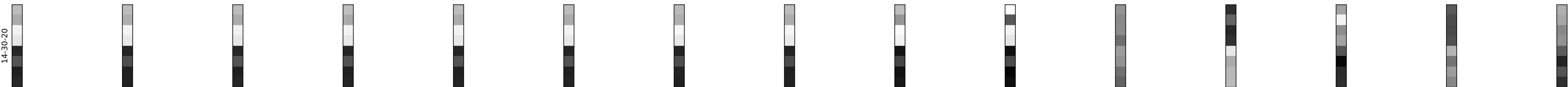
winter - 14-40-19



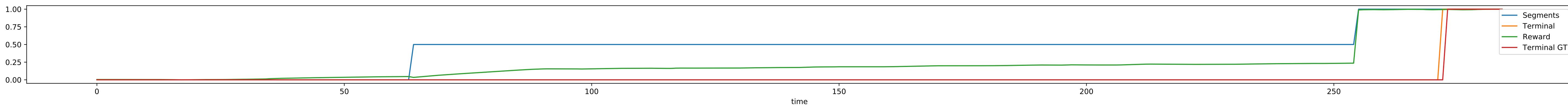
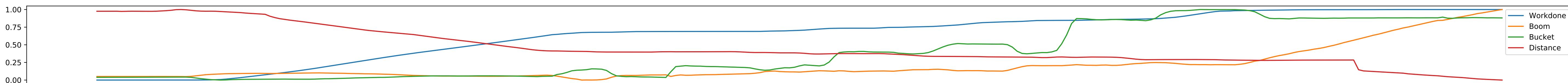
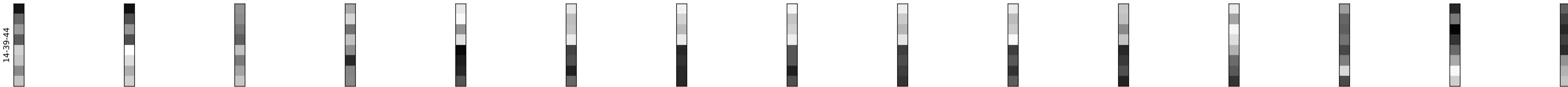
winter - 14-48-31

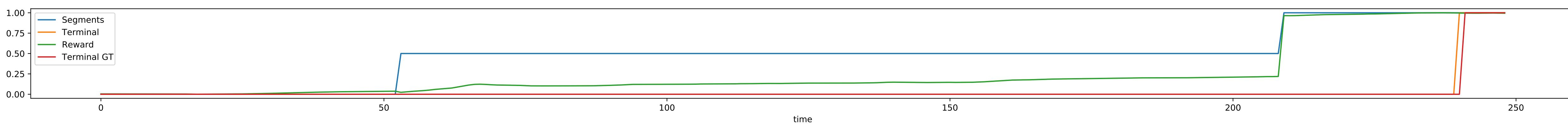
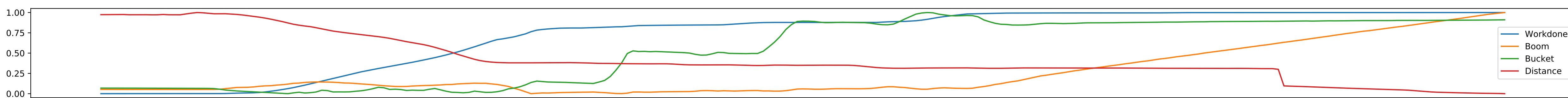
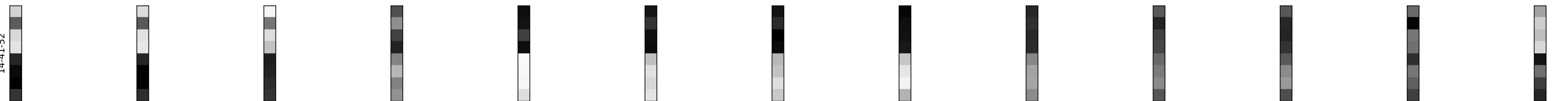
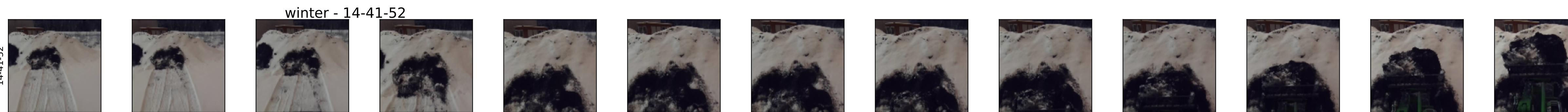


winter - 14-30-20

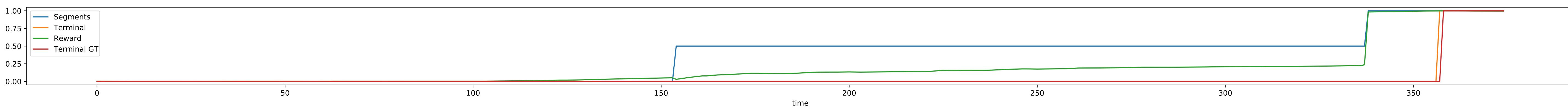
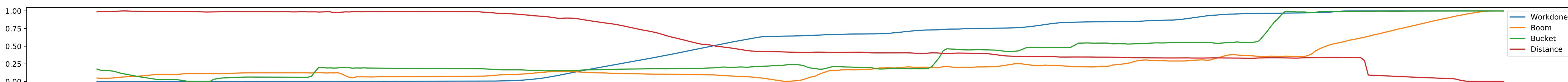
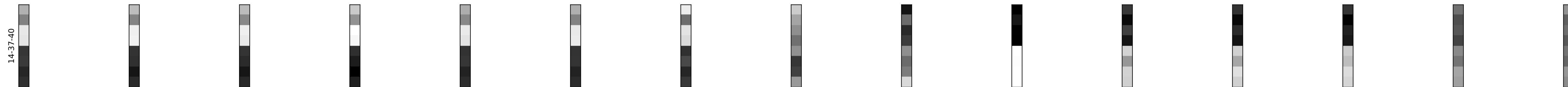


winter - 14-39-44

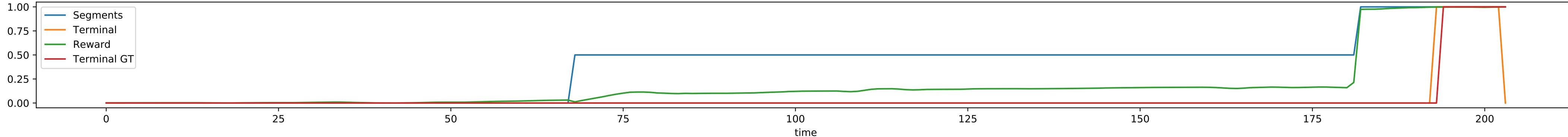
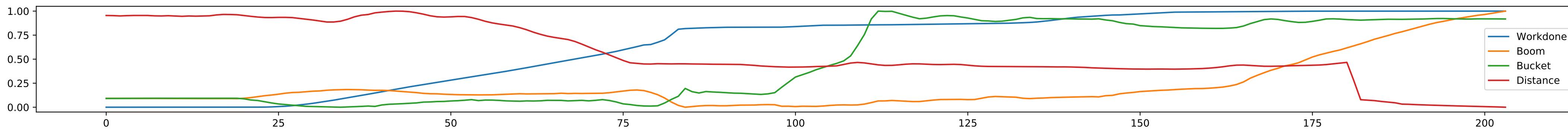
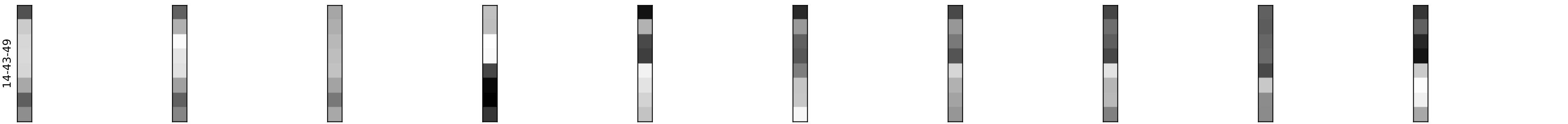




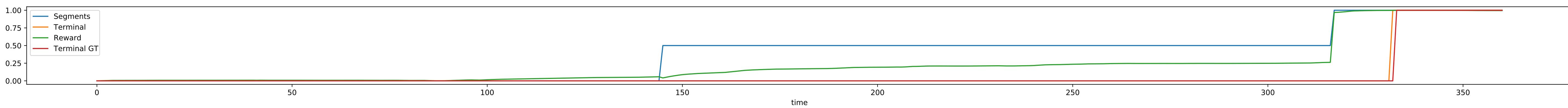
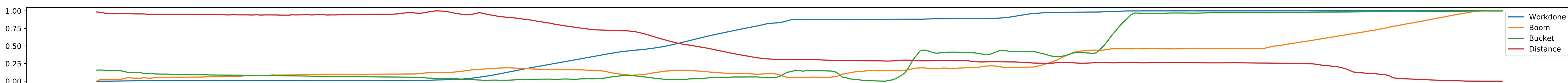
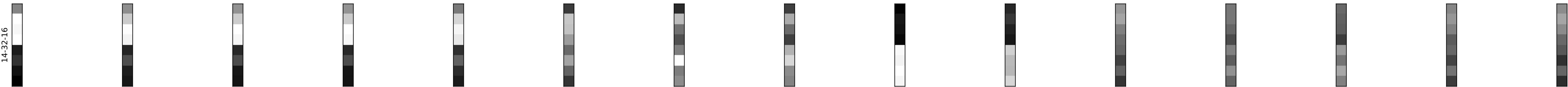
winter - 14-37-40



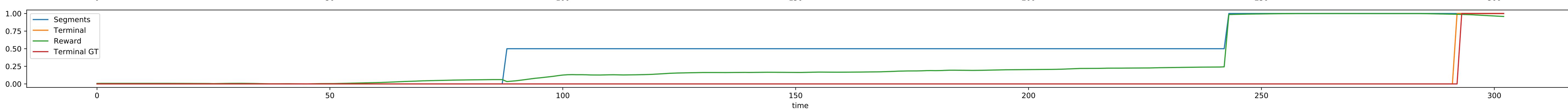
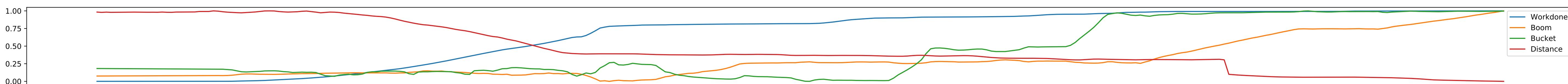
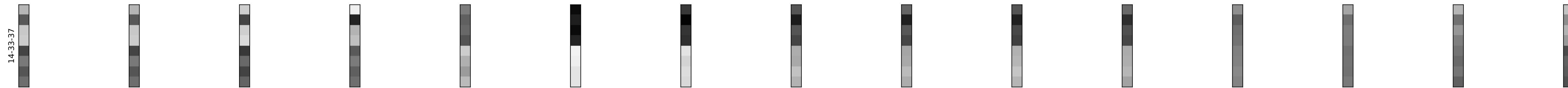
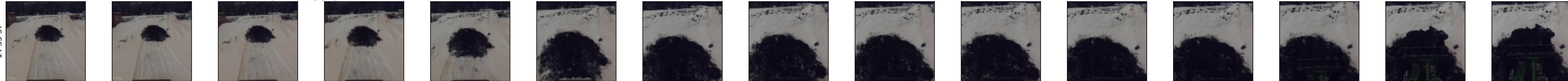
winter - 14-43-49



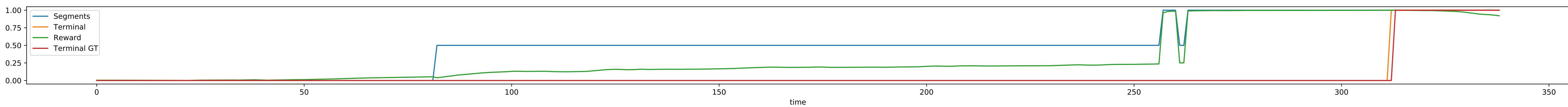
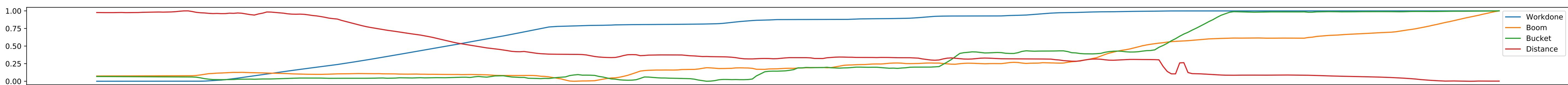
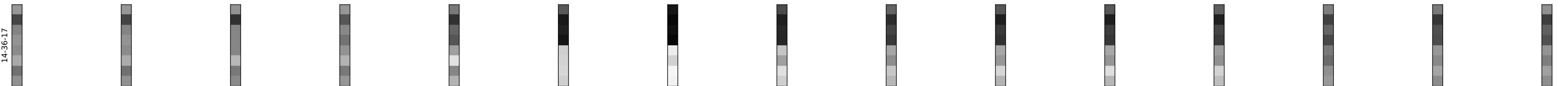
winter - 14-32-16



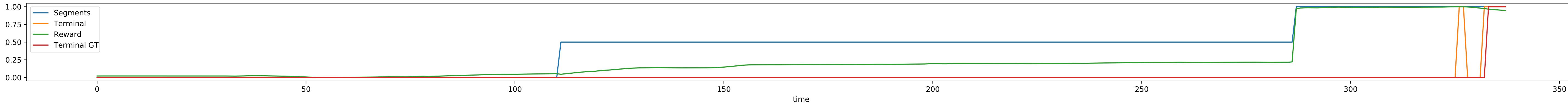
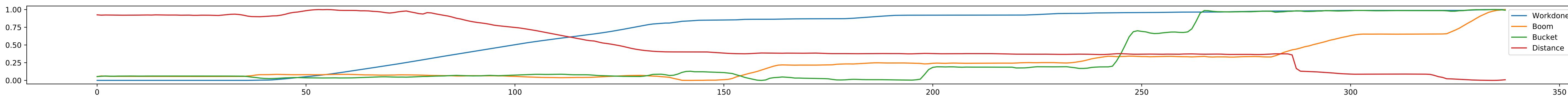
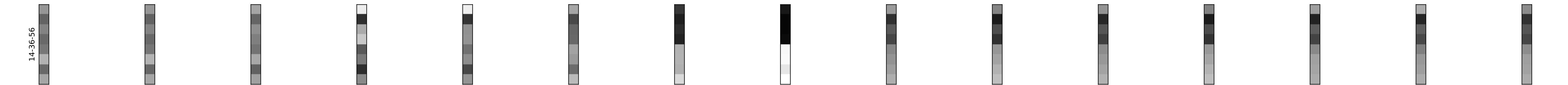
winter - 14-33-37



winter - 14-36-17



winter - 14-36-56

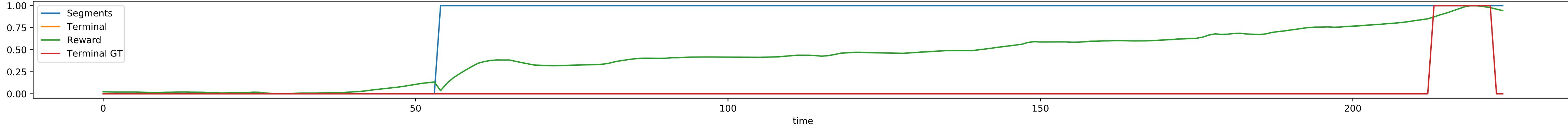
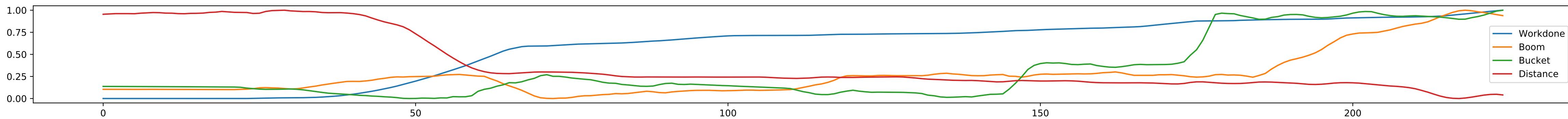


winter - 14-41-22

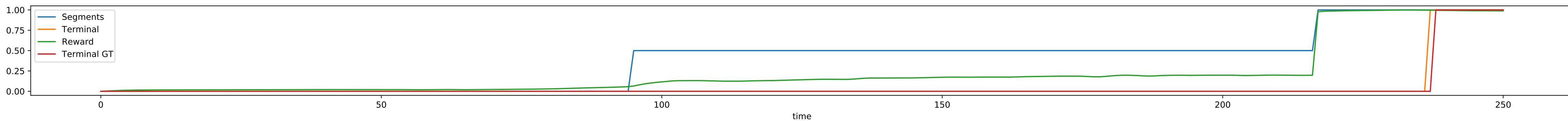
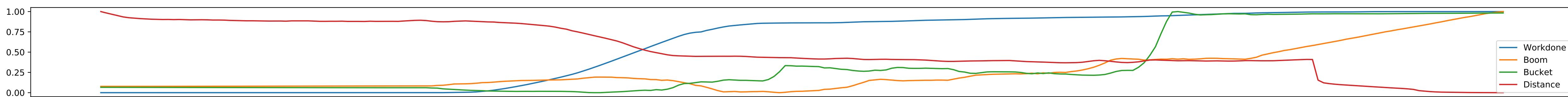
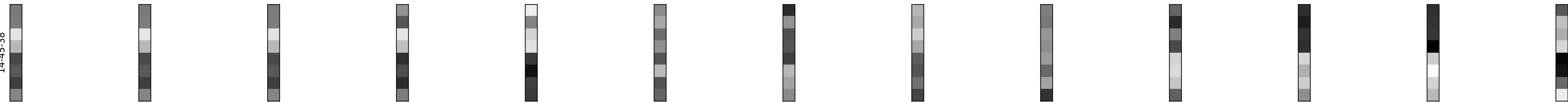
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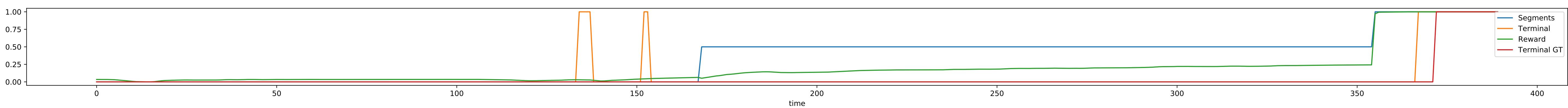
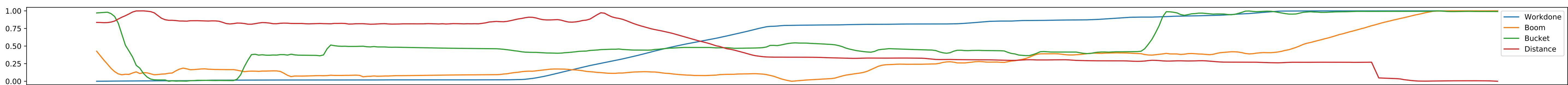
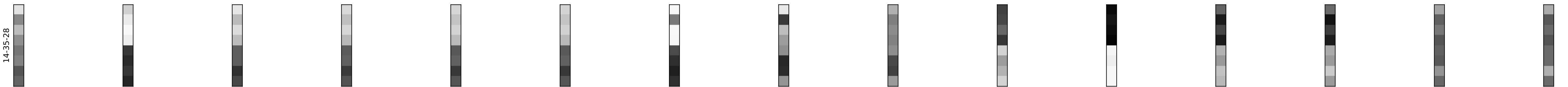
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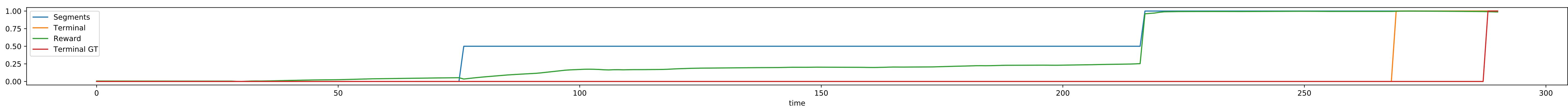
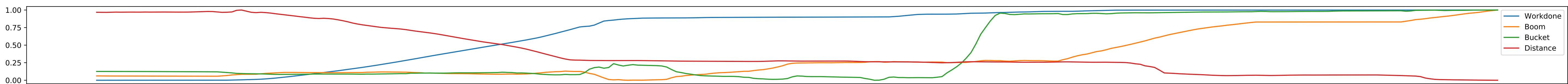
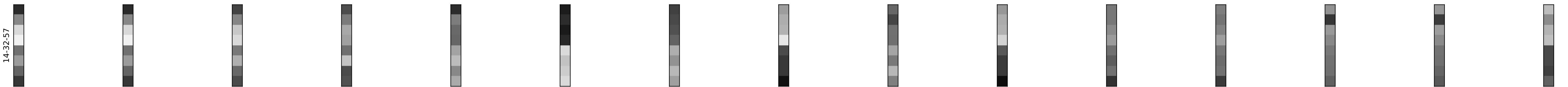
winter - 14-45-38



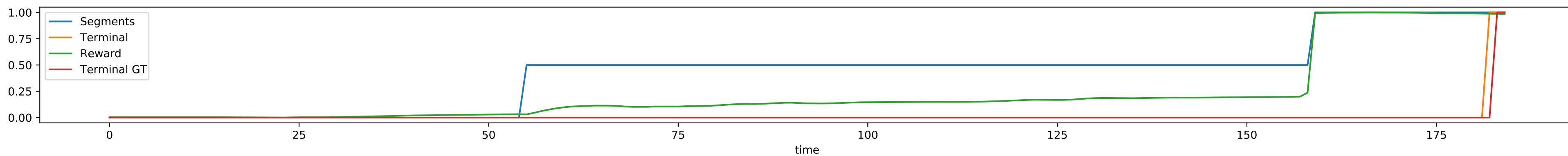
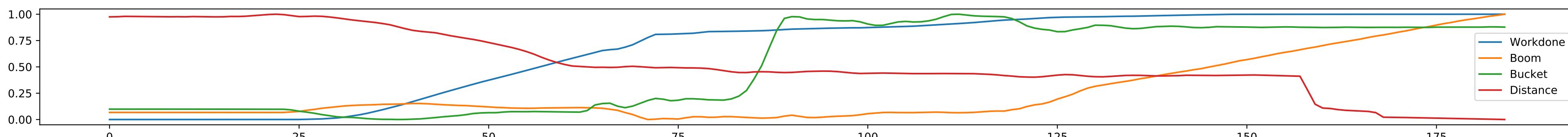
winter - 14-35-28



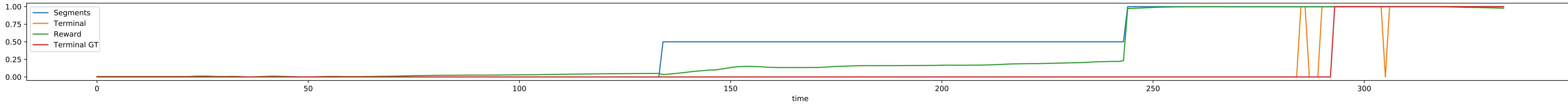
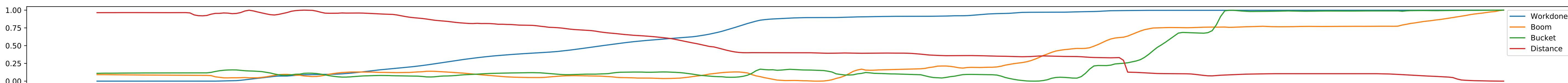
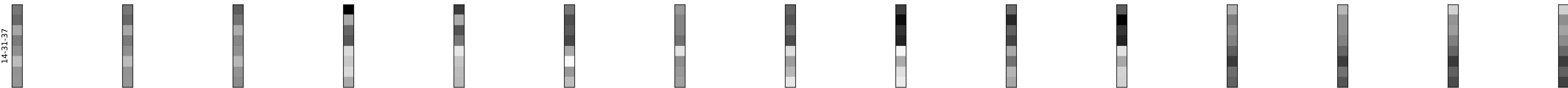
winter - 14-32-57

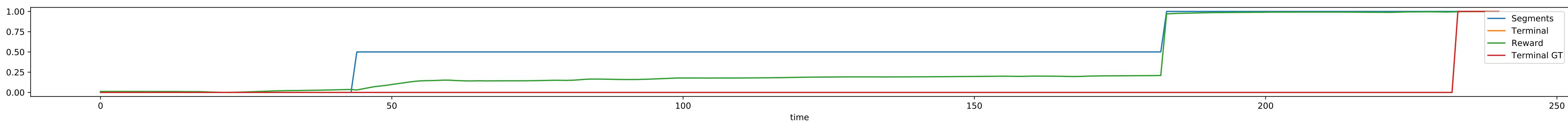
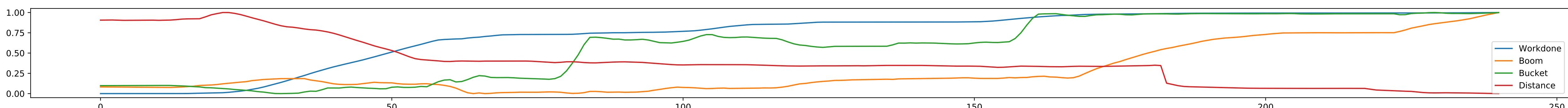
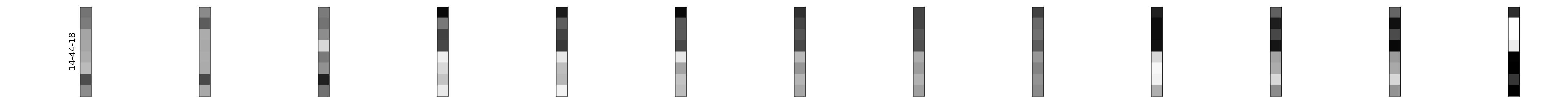


winter - 14-45-06

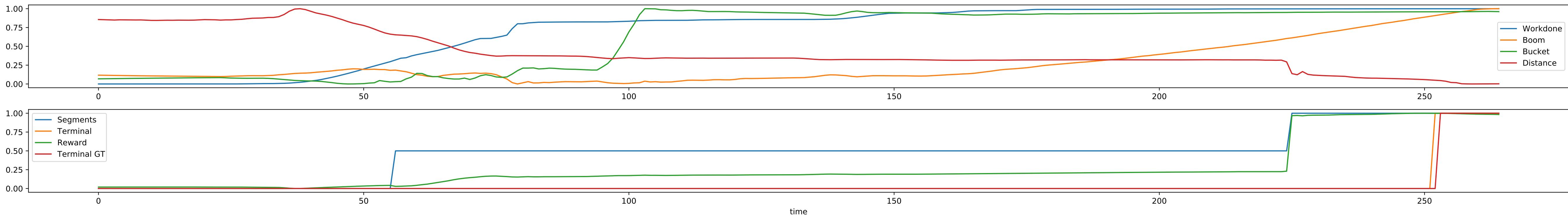


winter - 14-31-37





winter - 14-42-43

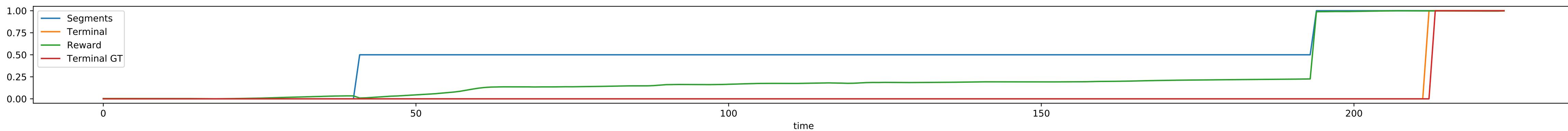
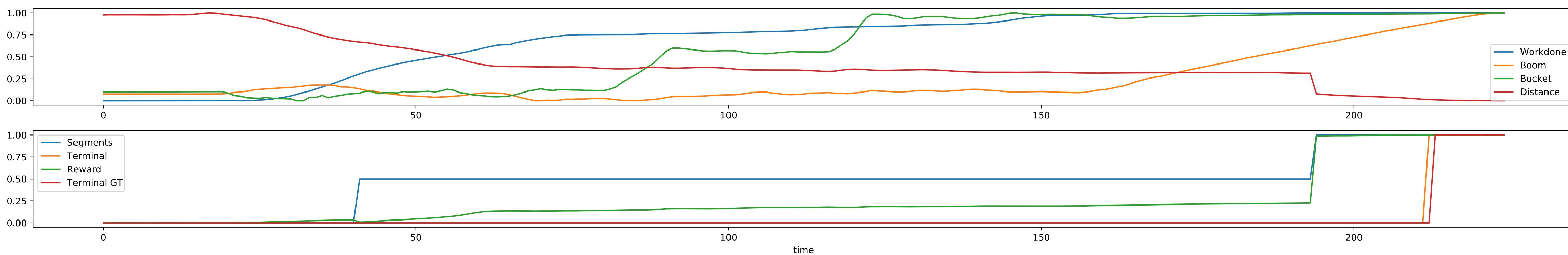


winter - 14-43-16

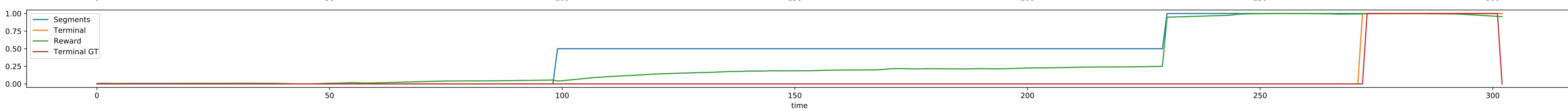
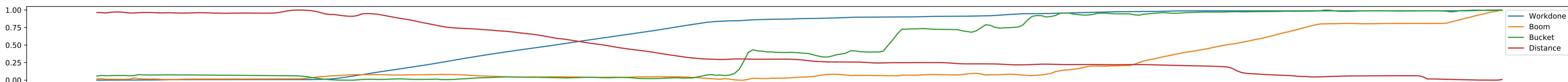
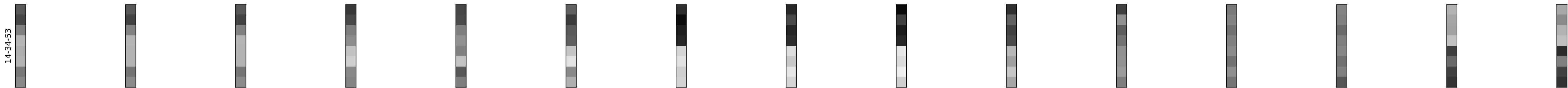
14-43-16



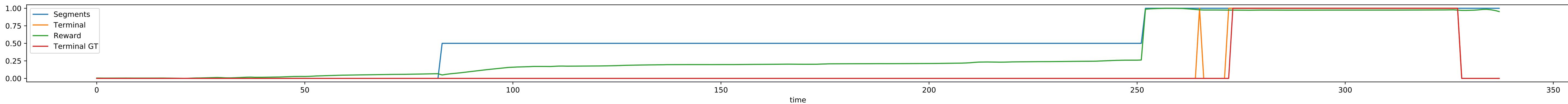
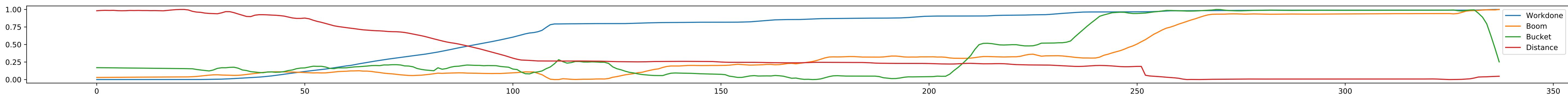
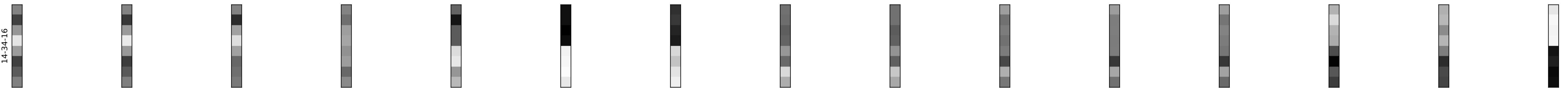
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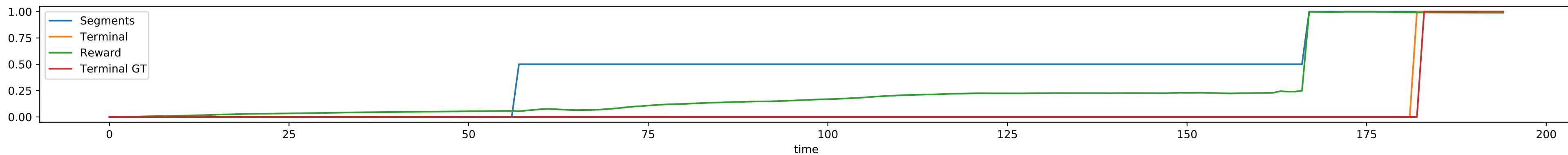
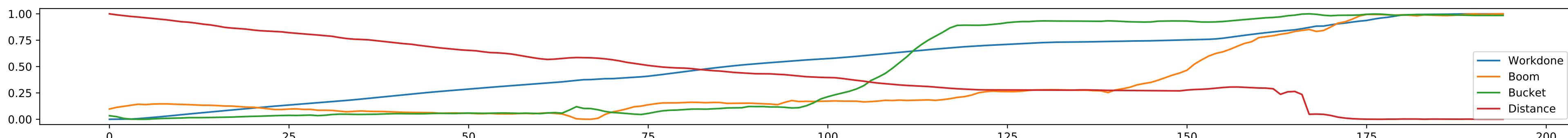
winter - 14-34-53



winter - 14-34-16



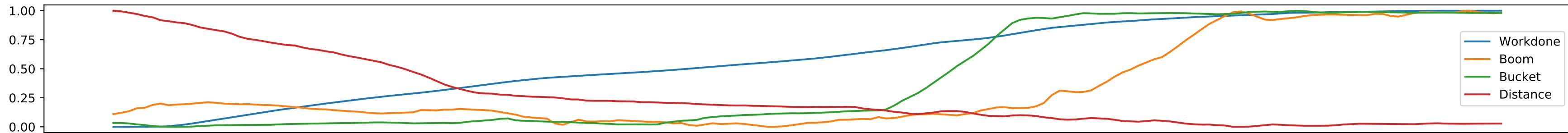
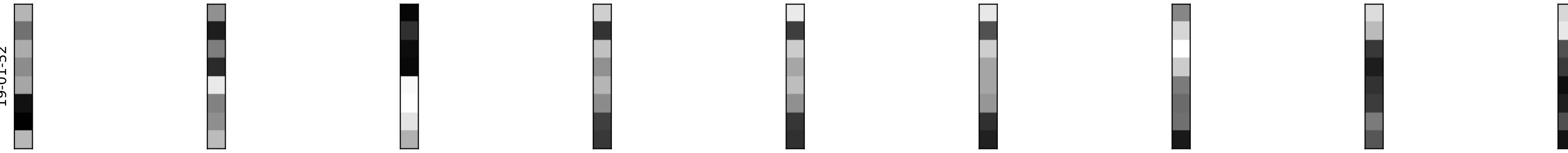
autumn - 16-23-38



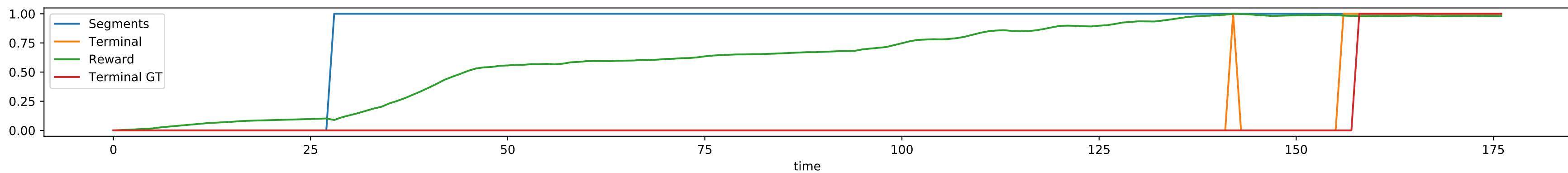
autumn - 19-01-52



19-01-52



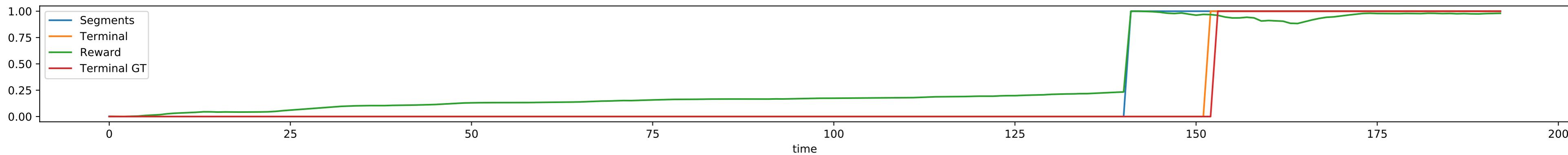
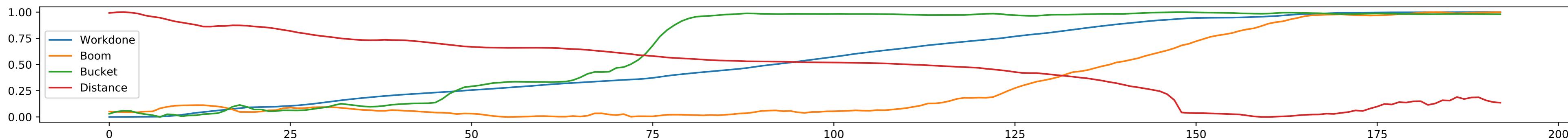
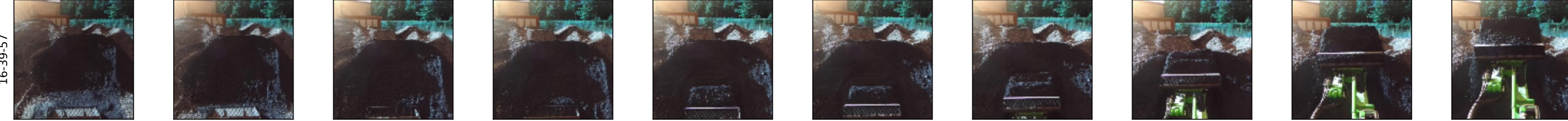
- Workdone
- Boom
- Bucket
- Distance



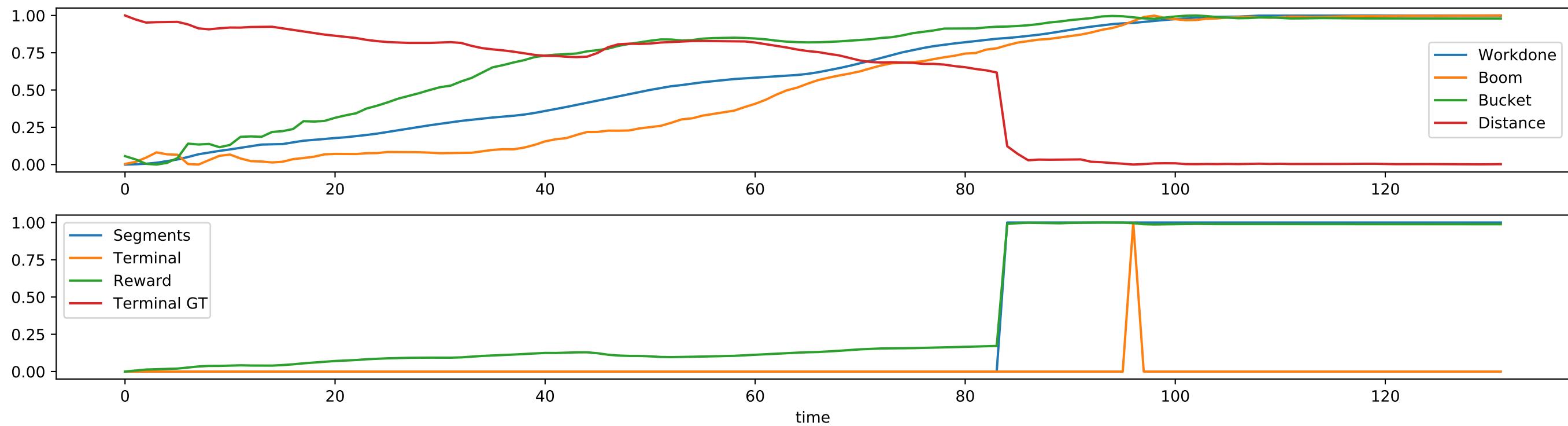
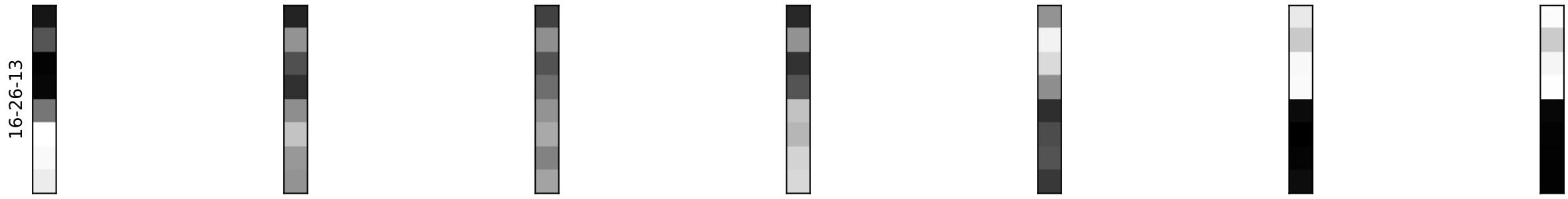
- Segments
- Terminal
- Reward
- Terminal GT

time

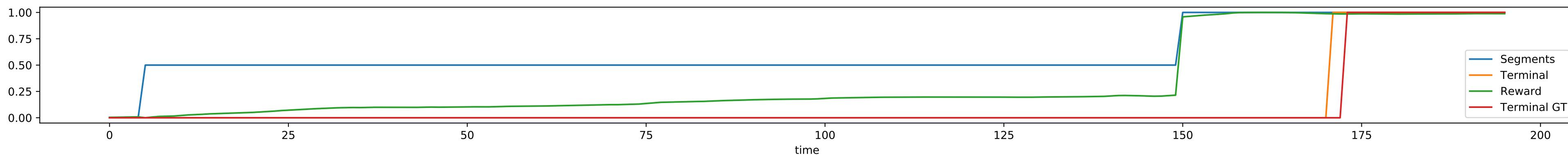
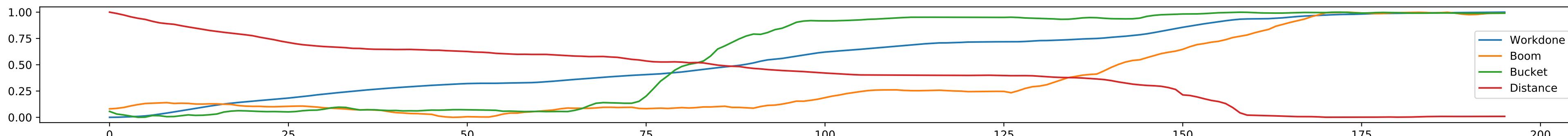
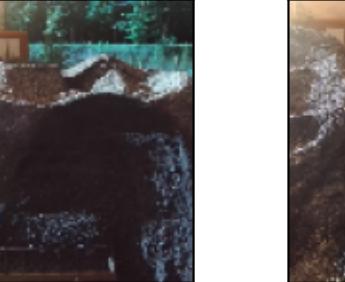
autumn - 16-39-57



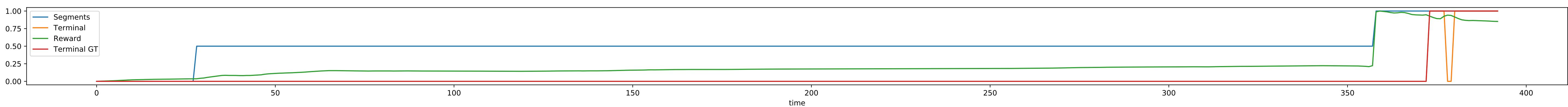
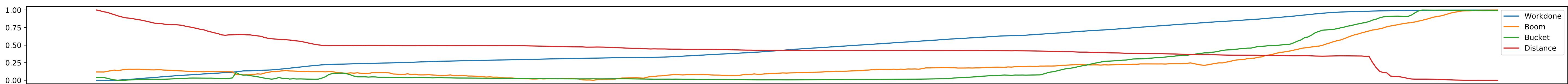
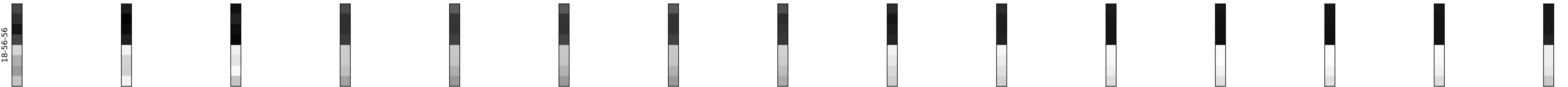
autumn - 16-26-13



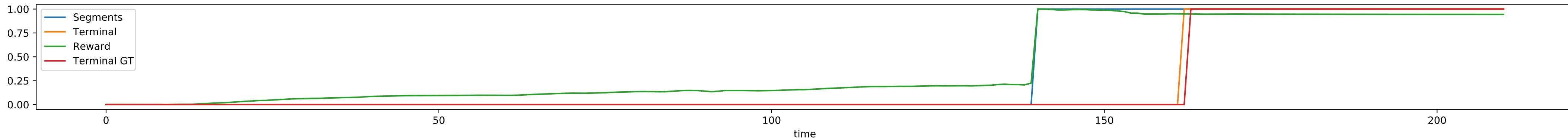
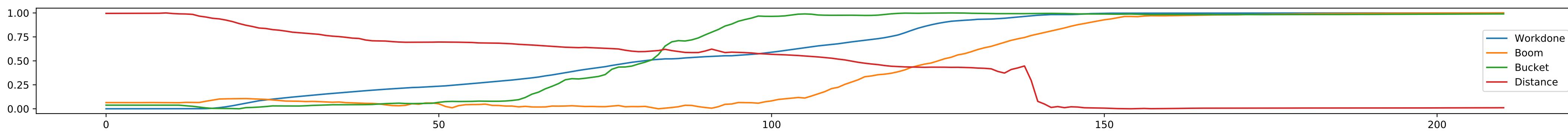
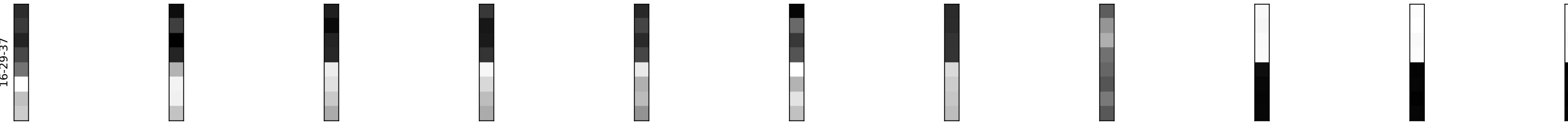
autumn - 16-31-52



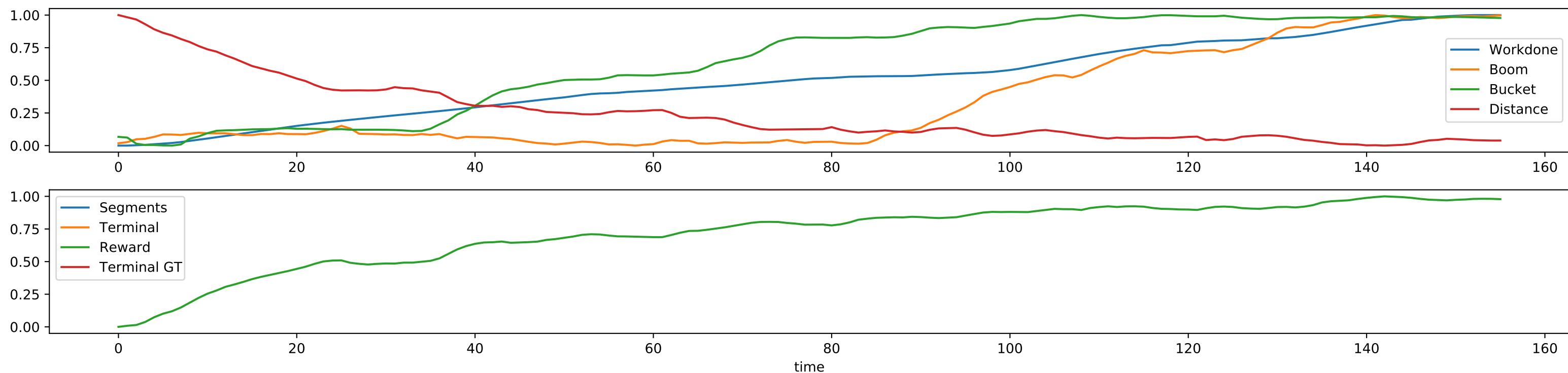
autumn - 18-56-56



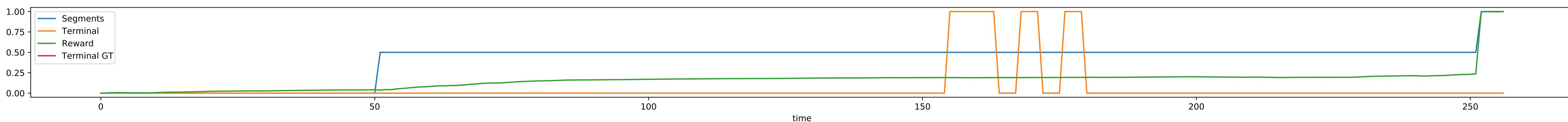
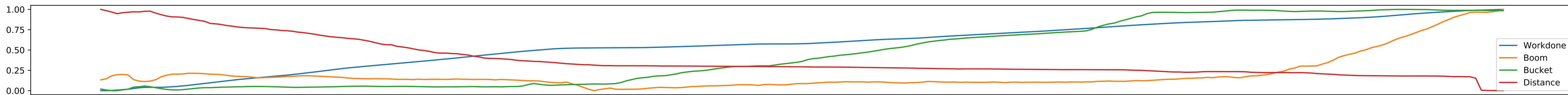
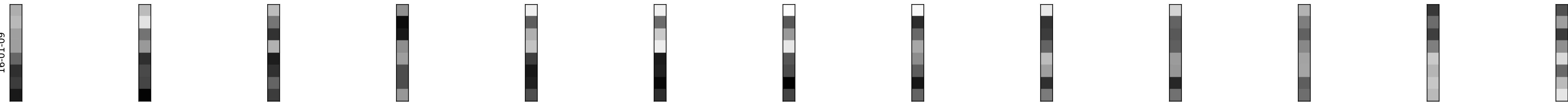
autumn - 16-29-37

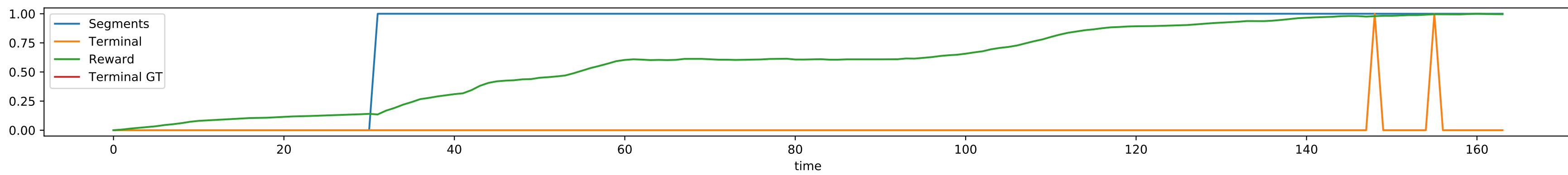
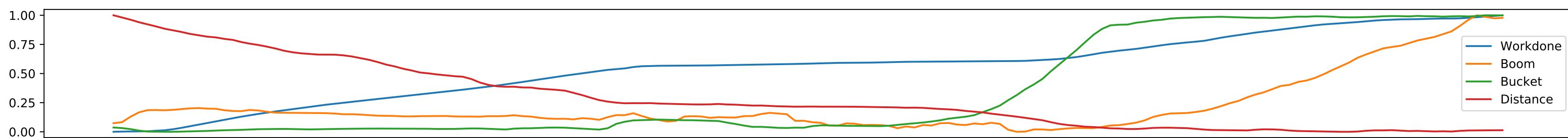
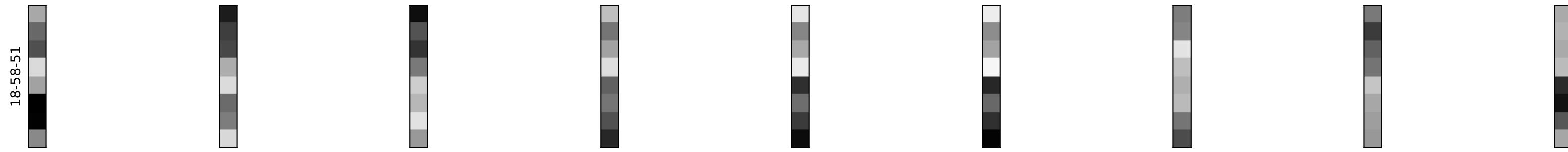
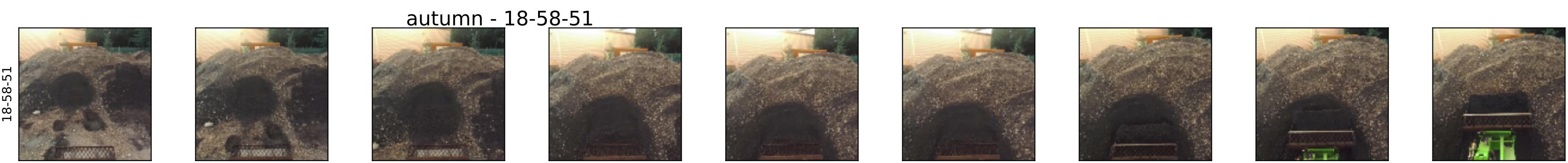


autumn - 16-27-12

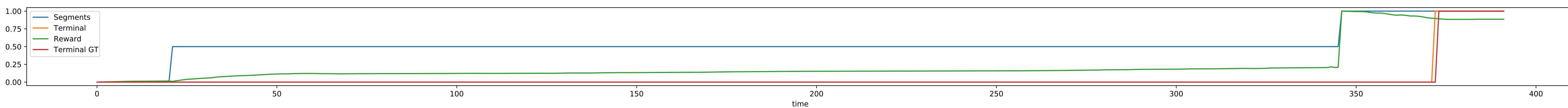
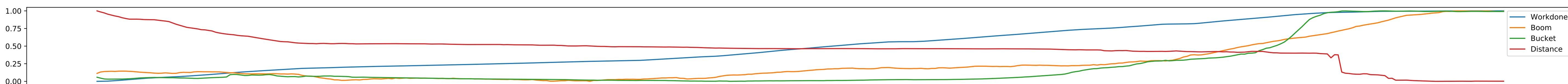
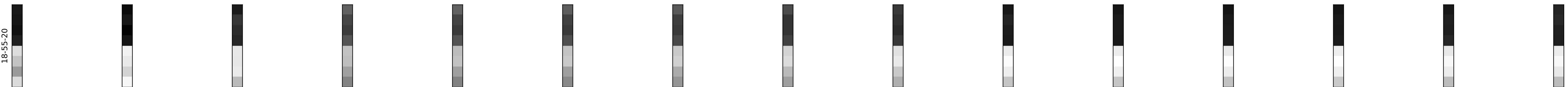


autumn - 16-01-09

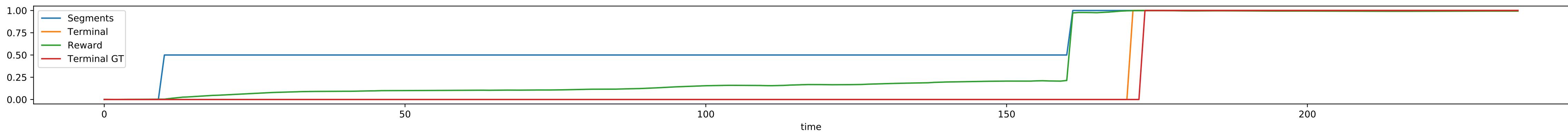
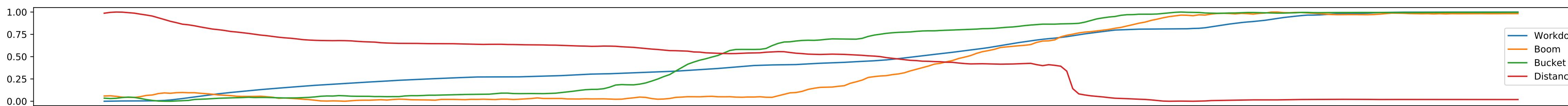




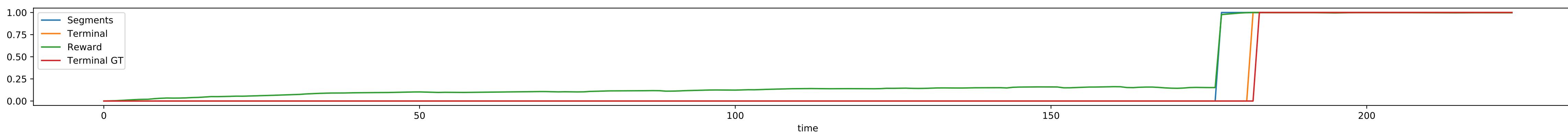
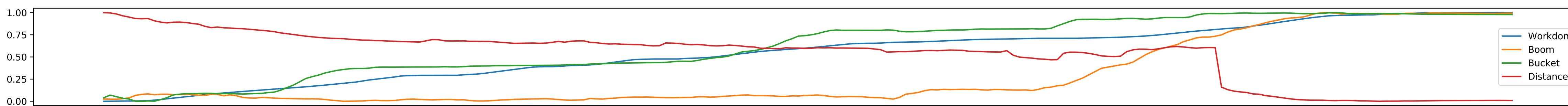
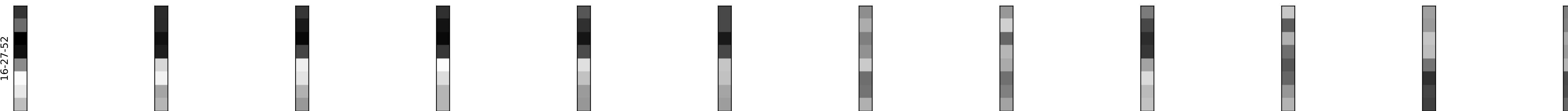
autumn - 18-55-20

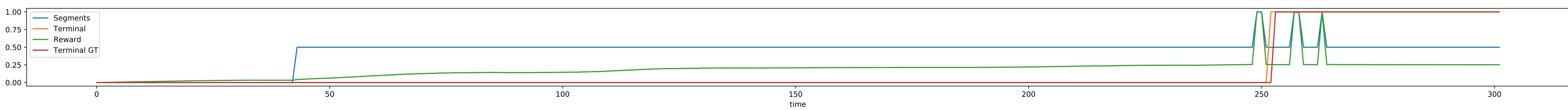
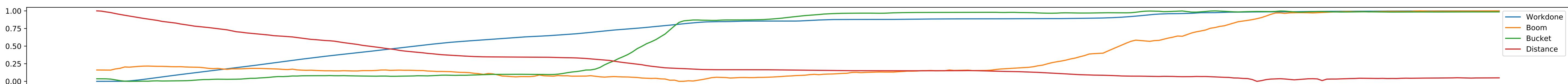
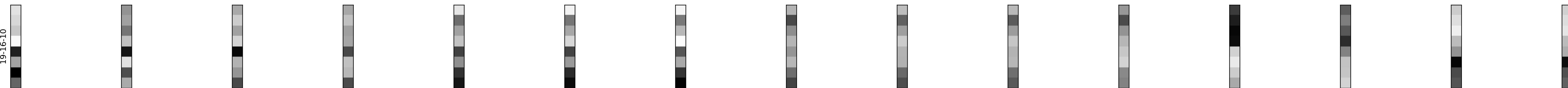


autumn - 16-17-19



autumn - 16-27-52



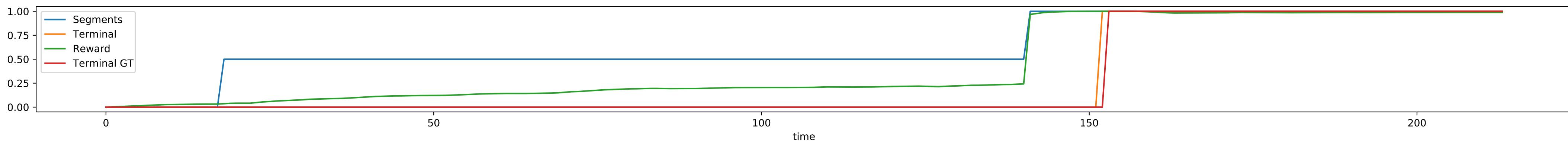
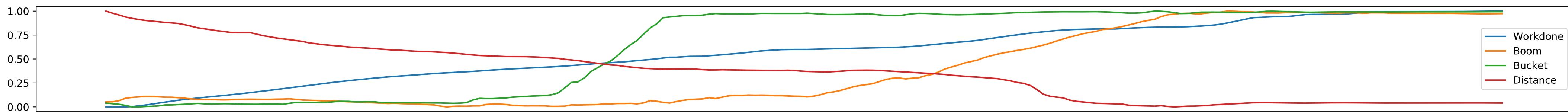
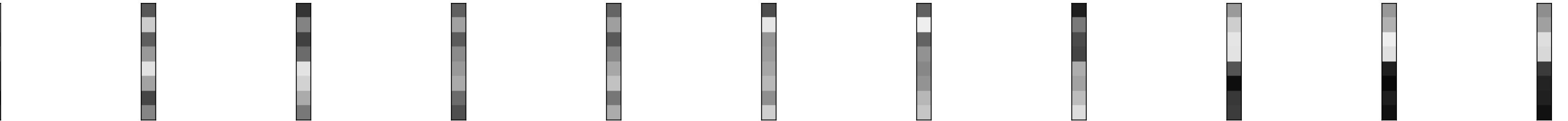


autumn - 16-34-22

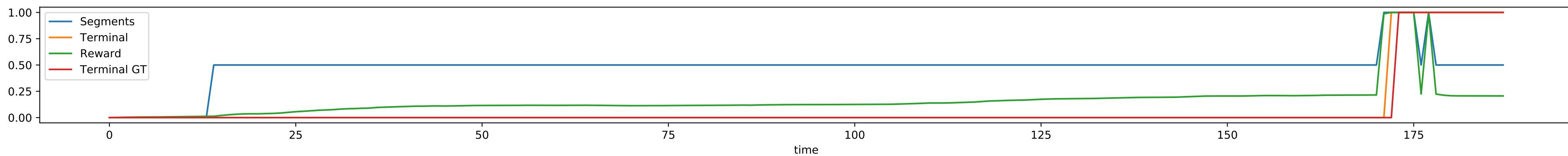
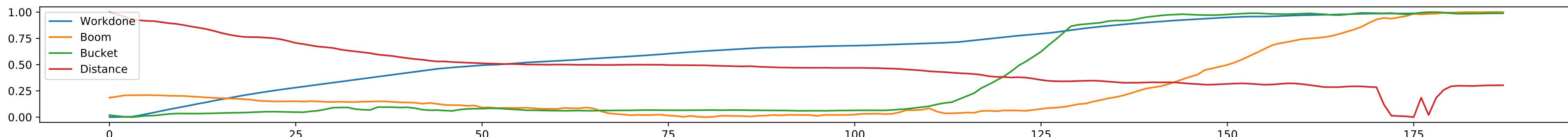
16-34-22



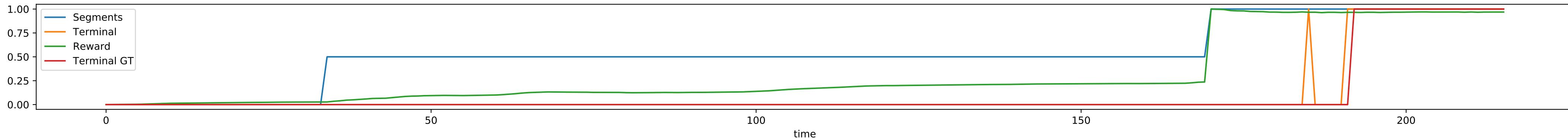
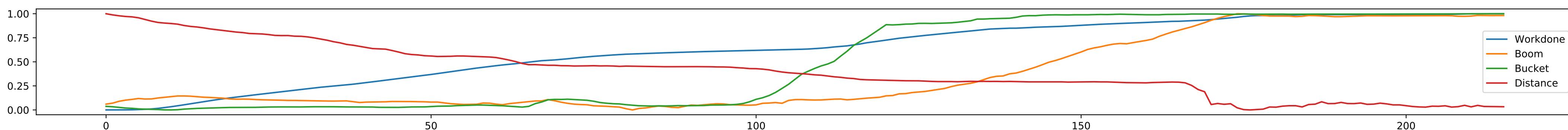
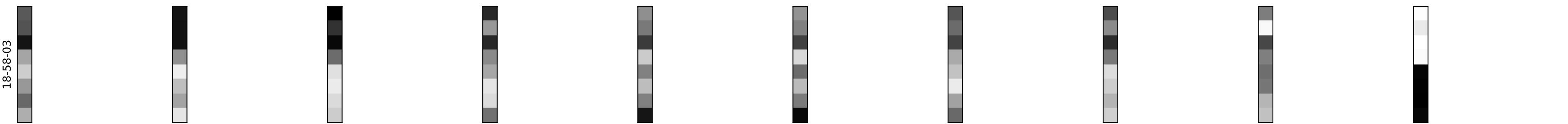
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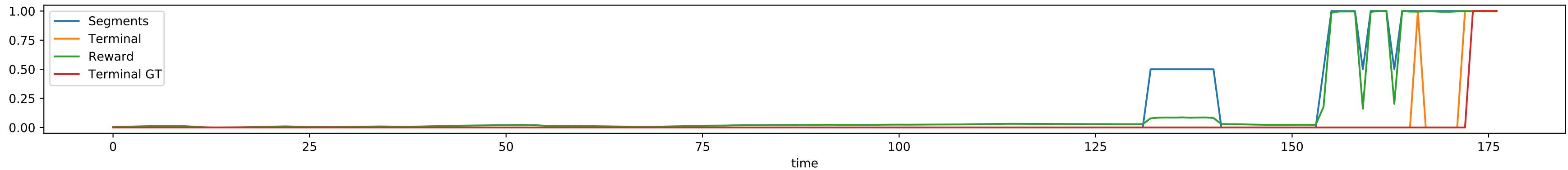
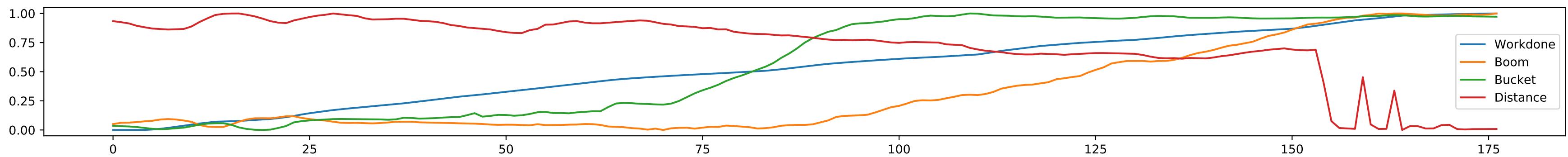
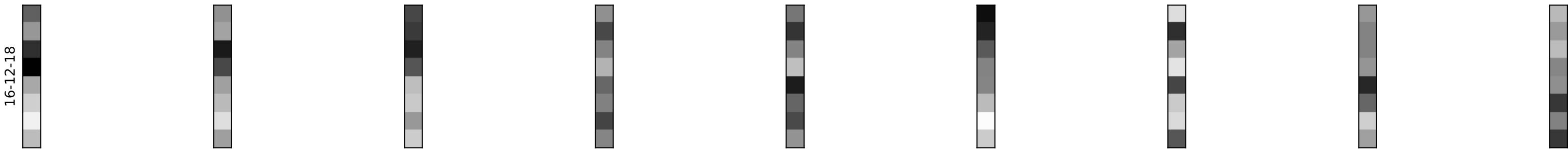
autumn - 18-54-34



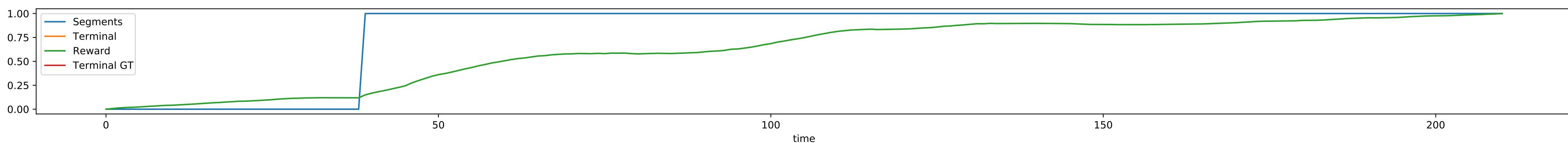
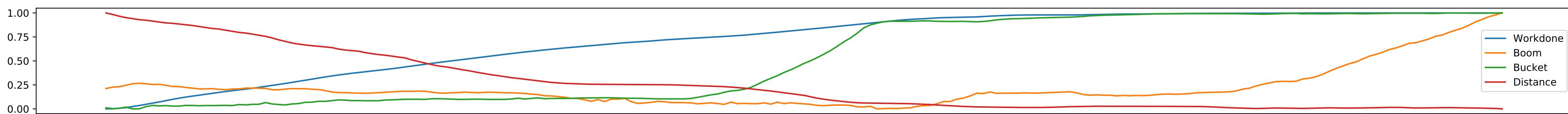
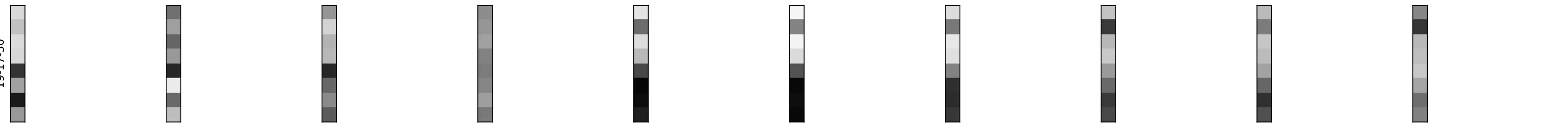
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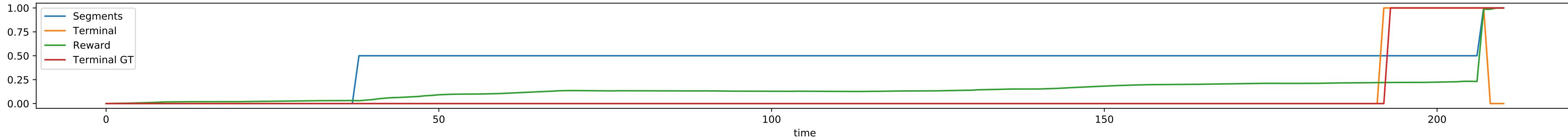
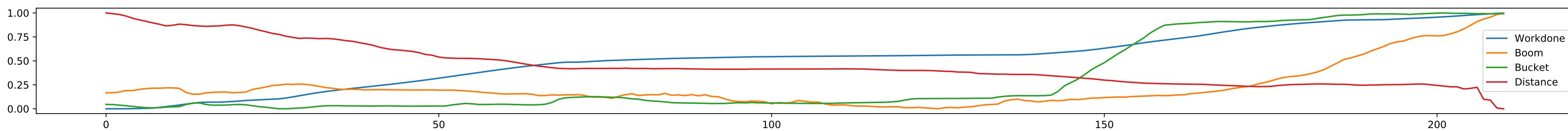
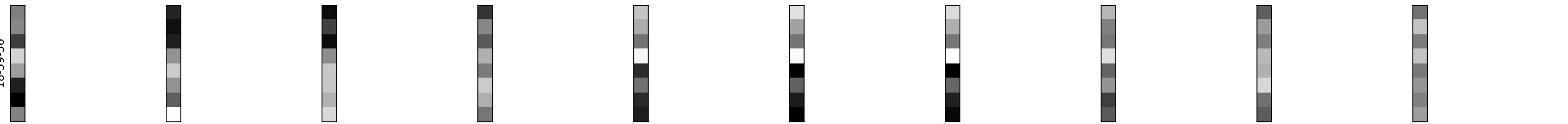
autumn - 16-12-18



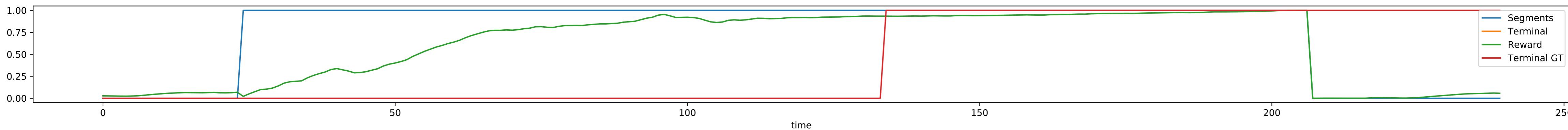
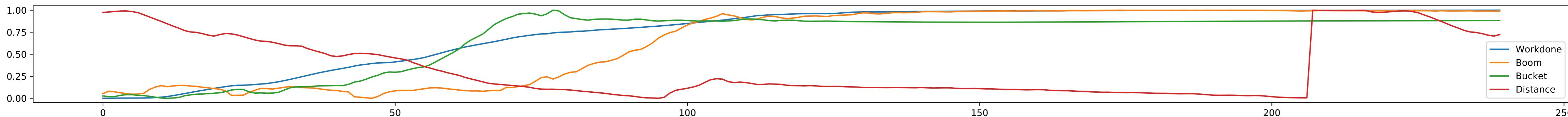
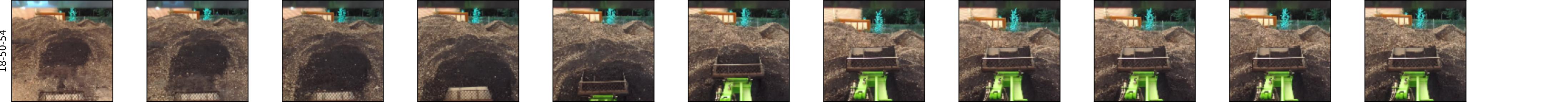
autumn - 19-17-30

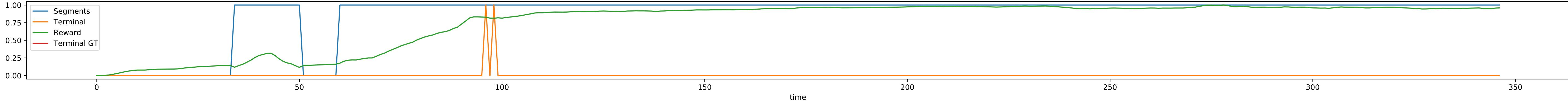
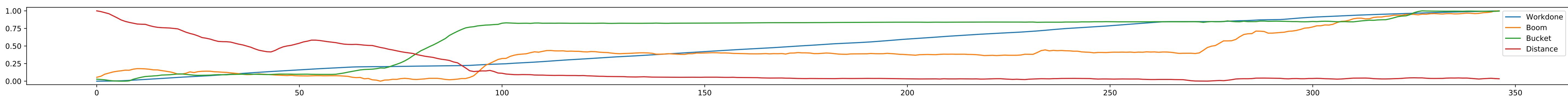
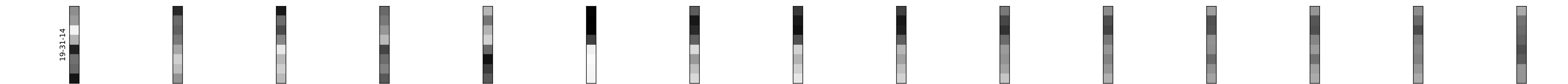


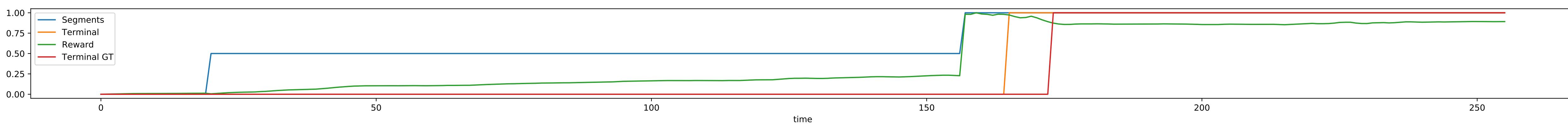
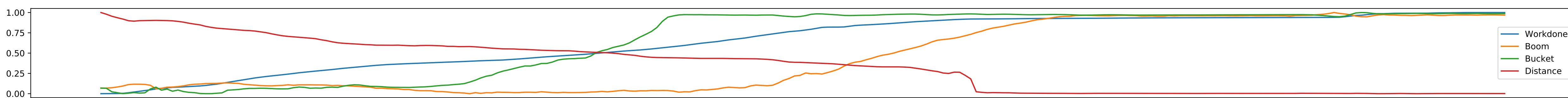
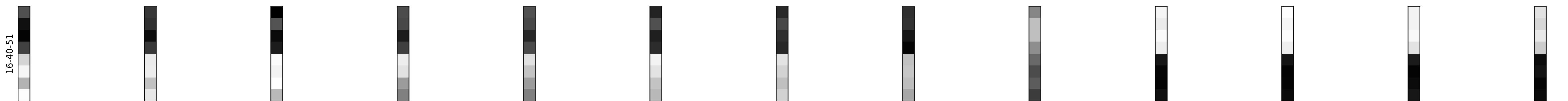
autumn - 18-59-36



autumn - 18-50-54





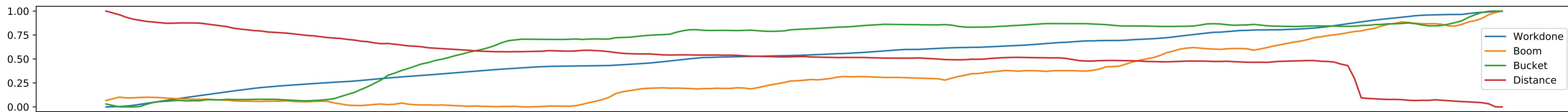
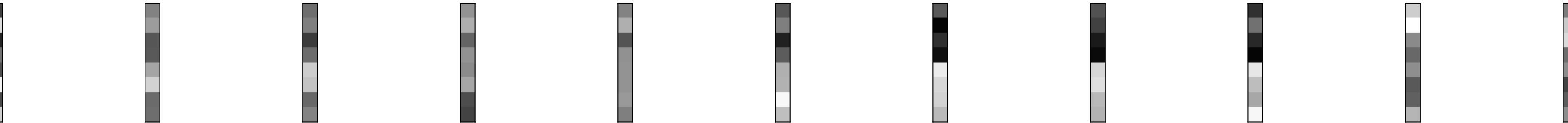


autumn - 16-19-28

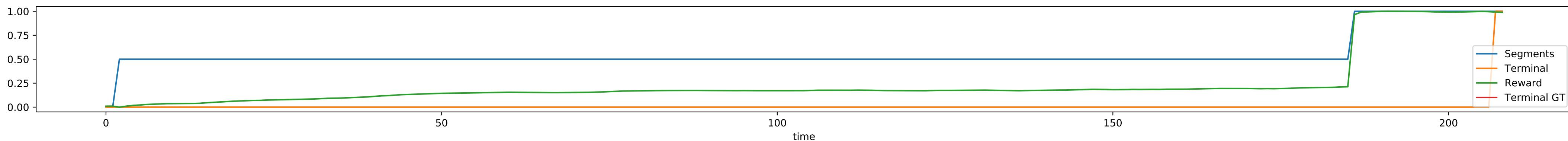
16-19-28



16-19-28

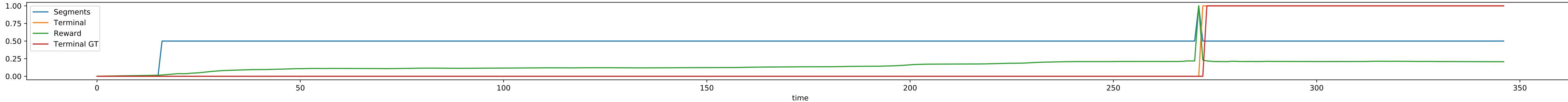
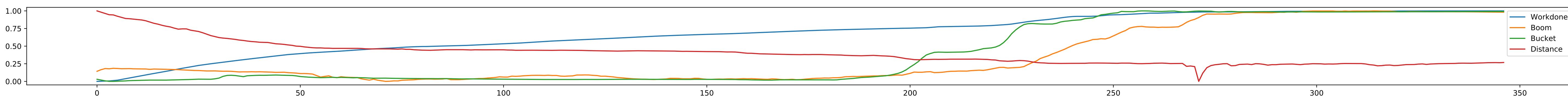
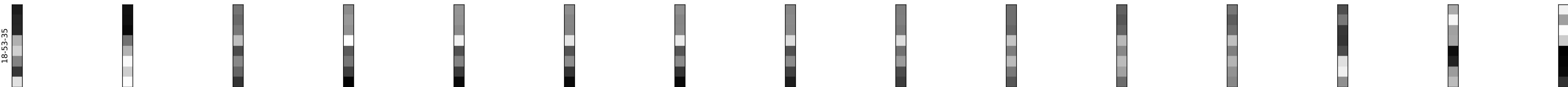


Workdone
Boom
Bucket
Distance



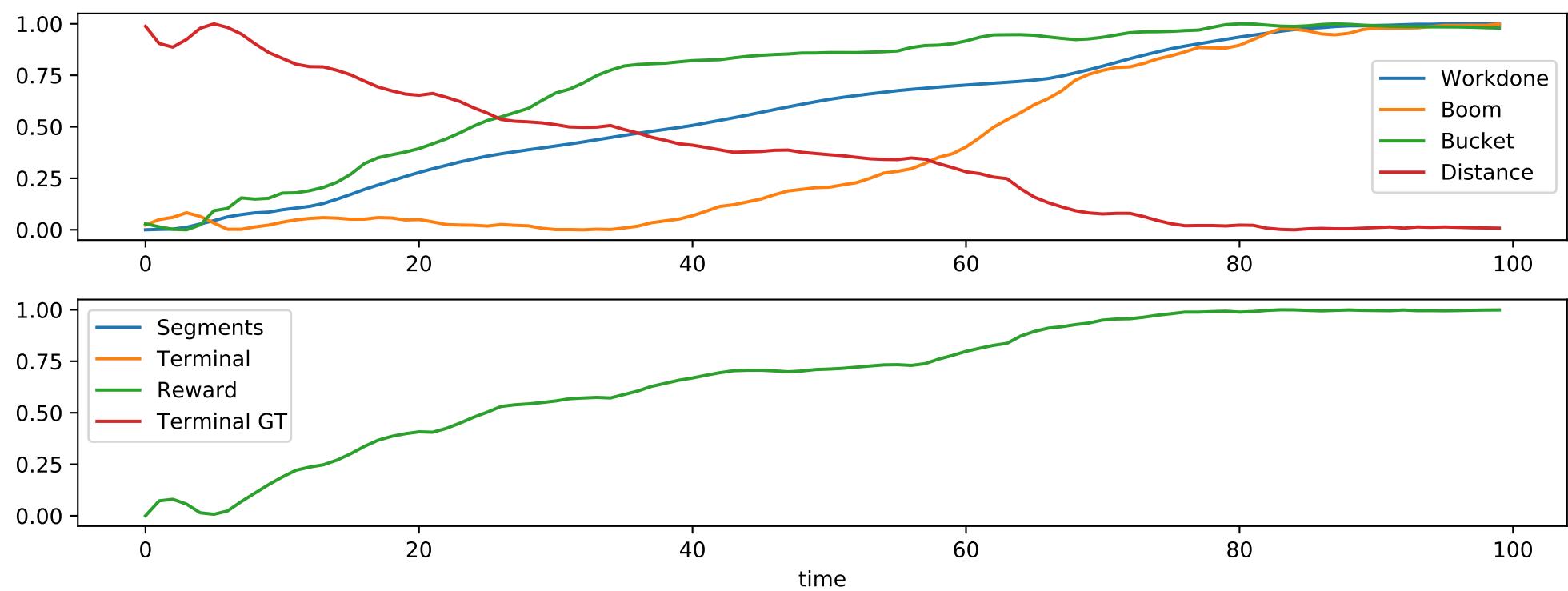
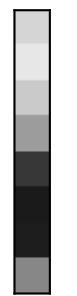
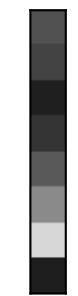
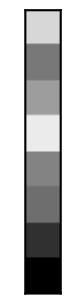
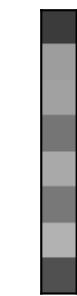
Segments
Terminal
Reward
Terminal GT

autumn - 18-53-35



autumn - 16-18-15

16-18-15



autumn - 16-18-15

16-18-15

