

Appendix A

Project Management

Table A.1 presents the hours required for each task within this project. The Gantt chart in Figure A.1 depicts the temporal distribution of the tasks.

Task	Duration (Hours)
Setup of Development Environment	40
Processing and Creation of Etna Dataset	100
Research on State-of-the-art Approaches	150
Evaluation of Baseline Models	150
Development of UMF Model	350
Model Evaluation	140
Writing of Thesis	40
Total	960

Table A.1: Gantt diagram showing the distribution of total amount of time dedicated to each project task.

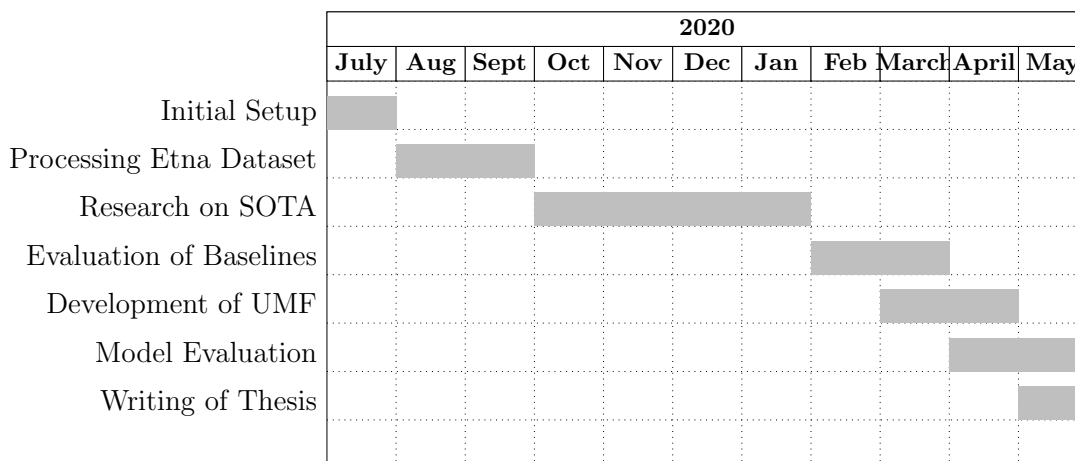


Figure A.1: Gantt chart of the project.

Appendix B

Extended Evaluation

B.1 Influence of Hyperparameters

The following tables show the hyperparameters used in each of the experiments for each variant.

Parameter	Value
Optimizer	Adam
Img size	224x224
Img Lr	3×10^{-4}
PC Lr	3×10^{-4}
Batch size	64
Global margin	0.2
Fusion weight	0.5

Table B.1: Hyperparamaters used for training the baseline UMF.

Parameter	Value
#Img Superfeatures	24
#PC Superfeatures	64
#Heads	4
#Iterations	6
dim img super	128
dim pc super	32
Img margin	1.1
PC margin	1.1
Img weight	0.1
PC weight	0.5

Table B.2: Hyperparamaters used for training UMF with superfeatures, we reduce the weight of the visual modality to avoid overfitting [13]

Parameter	Value
dim img super	128
dim pc super	8
Img margin	0.4
PC margin	0.4
Img weight	0.1
PC weight	0.5
<i>#MHTblocks</i>	2

Table B.3: Hyperparamaters used for training UMF with RANSAC