

1 SHM Method Investigation

1.1 Simulation model formulation for damage detection

1.2 Vibration-based SHM method investigation

2 Practical Damage Observation Study

2.1 Damage Detection Case study

2.2 Real industry observation data collection

2.3 SHM methods state of art investigation

2.4 SHM in industry condition investigation

3 sequential Decision Making Modelling

3.1 Heuristic Principle Decision Modelling

3.2 Markov Decision Process Modeling

3.3 Partially Observable Markov Decision Process Modelling

3.4 Environmental Variability Modelling

4 Deep Reinforcement Learning Algorithm Implementaion

4.1 Single-agent Actor-Critic Algorithm

4.2 Multi-agent Actor-Critic Algorithm

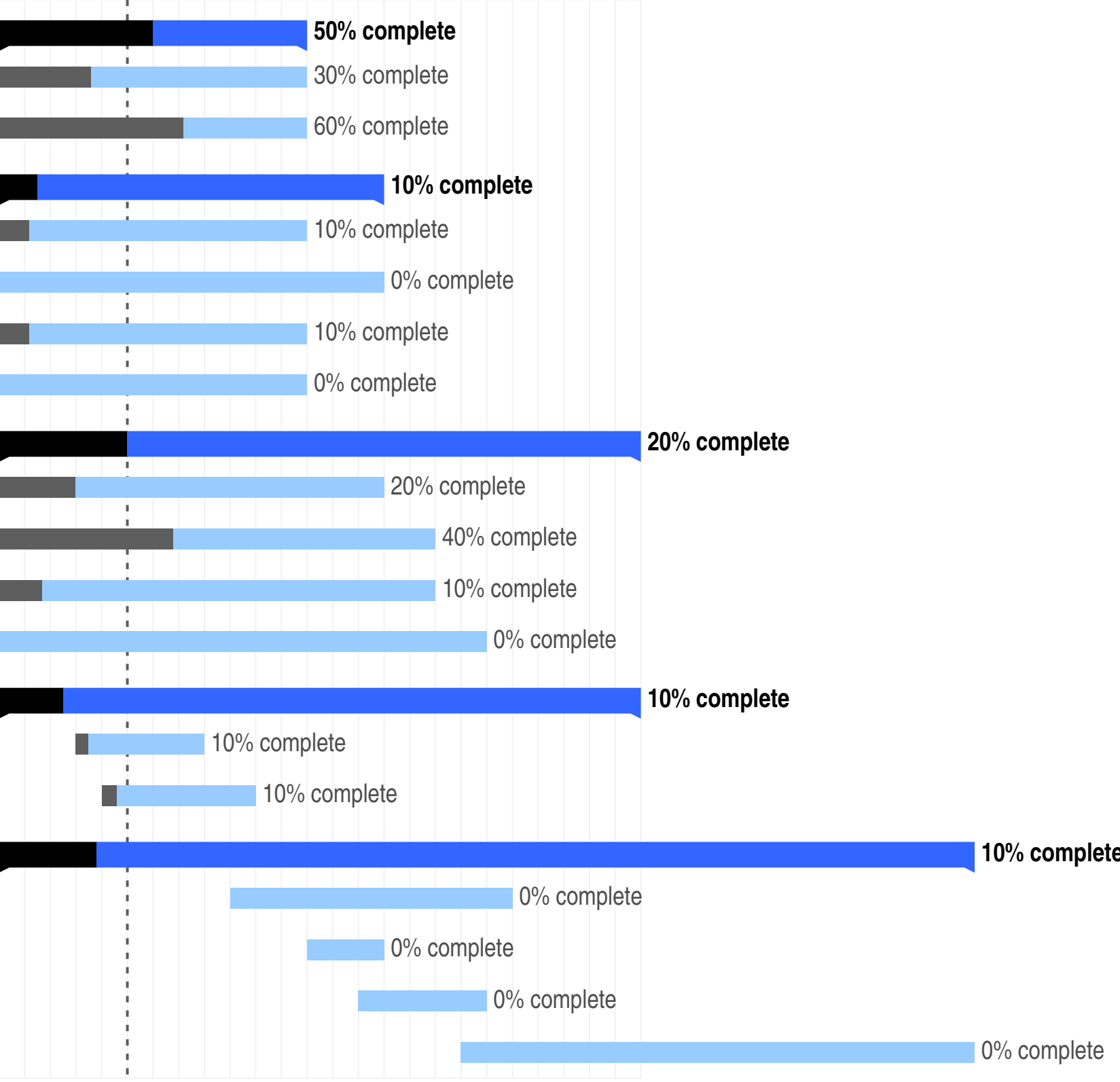
6 Writing formal paper to summarize

6.1 Contribution on Decision Making Modelling

6.2 Contribution on Structural Integrity Management Modelling

6.3 Contribution on quantifying the value of information of a SHM system

6.4 Final thesis writing



TODAY