

Thesis Progress Form

CHARLES DARWIN UNIVERSITY

College of Engineering, IT, and Environment

Name: Shane Reynolds

Unit: ENG720

Title: Automatic generation control of a two area power system using deep reinforcement learning

Supervisors: Charles Yeo & Stefaniya Klaric

Time & Date: May 13, 2020 @ 2.30pm

1 Progress since last meeting

- Completed writing sections of background on Monte Carlo and Temporal difference approaches to RL
- Implemented time iterative modelling using ode integrate
- Split system and control functions into separate parts and confirmed that modelling results match with combined system
- Implemented environment in Open AI
- Implemented classical control agent to interact with Open AI two area power system
- Commenced re-writing of approach

2 Discussion Points

- No points to discuss at this time



3 Plan until the next meeting

- Continue writing interim report
- Complete implementation of DRL agent, and train using simulated signals to confirm proof of agent capability

Supervisor

May 13, 2020