

MCS: Rodin project

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1 Hours spent

I spent a total of 11 hours on this project, 5 of which were spent trying to install the needed software on different OS'es.

2 LTL/CTL statements

1. $\text{AG} (\text{EF} (\{\text{in_train} = \text{TRUE}\} \ \& \ \text{not} \ [\text{hop_off}] \ \& \ \text{not} \ [\text{go_to_next}]))$
2. $\text{G} (\{\text{in_train} = \text{TRUE}\} \Rightarrow [\text{go_to_next}] \ \text{U} \ [\text{hop_off}])$
3. $\text{AF} (\text{AG} (([\text{hop_on}] \ \text{or} \ [\text{hop_off}]) \ \& \ \text{not} \ [\text{go_to_next}]))$
4. $\text{G} (\{\text{current_station} = \text{A}\} \Rightarrow \{\text{current_station} = \text{C}\} \ \text{R} \ \{\text{not} \ (\text{current_station} = \text{F})\})$

2.1 Design decisions

1. "It is always possible ..." means that in every future state, there must be the possibility of getting into a state where the given requirements are fulfilled.
2. I decided that a ride on a train cannot be infinite, so the use of U forces the passenger to hop off at some point in the future.
3. "Eventually" is interpreted as: For all paths beginning from the current state, at some point in the path all states of all paths beginning from that point fulfill the given requirement.
4. /