Progress

Carlos Padilla,

Overall
Performance
Metric

Sample Data

Design

Reward function's
schema

Project Progress

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$$M_j = \left[I, t_j', \Delta t_j, P_j^R, P_j^D \right], \left[W_I^R, W_I^D \right]$$

$$\xi_j = S_j P_j e^{\left(\frac{t_j^E - t_j^R}{\sigma}\right)^2} P_j^D d_j g(k)$$

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Overall Performance Metric

$$\xi = \sum_{j=1}^{J} \xi_j + \frac{\alpha}{N} \sum_{i=1}^{N} \left(\frac{E_i - E_L}{E_{max} - E_L} \right)$$

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```
enigma   deep-blue   ../sql/sqlite   python3 display_data_comms_rx.py
ID  | Start Time (UTC)      | End Time (UTC)        | Duration (s) | Power (W) | Voltage (V) | Priority T | Priority E
--------------------------------------------------------------------------------------------------------------------
1   | 2024-04-24 03:42:34   | 2024-04-24 03:45:55   | 201          | 10.47     | 4.81        | 0.60       | 0.50
2   | 2024-04-23 04:38:34   | 2024-04-23 04:40:02   | 88           | 5.06      | 4.29        | 0.93       | 0.33
3   | 2024-04-24 14:03:34   | 2024-04-24 14:07:30   | 236          | 11.74     | 3.93        | 0.21       | 0.61
4   | 2024-04-24 18:12:34   | 2024-04-24 18:16:35   | 241          | 11.18     | 3.61        | 0.92       | 0.32
5   | 2024-04-25 16:56:34   | 2024-04-25 16:58:02   | 88           | 9.11      | 4.64        | 0.62       | 0.79
6   | 2024-04-26 00:52:34   | 2024-04-26 00:56:02   | 208          | 18.29     | 3.73        | 0.25       | 0.43
7   | 2024-04-25 10:26:34   | 2024-04-25 10:29:41   | 187          | 14.33     | 3.84        | 0.45       | 0.59
8   | 2024-04-27 00:44:34   | 2024-04-27 00:46:11   | 97           | 5.09      | 4.02        | 0.22       | 0.55
9   | 2024-04-27 17:12:34   | 2024-04-27 17:13:21   | 47           | 14.45     | 4.45        | 0.88       | 0.35
10  | 2024-04-27 16:10:34   | 2024-04-27 16:12:01   | 87           | 17.47     | 4.86        | 0.68       | 0.67
11  | 2024-04-28 00:33:34   | 2024-04-28 00:36:04   | 150          | 11.27     | 3.41        | 0.91       | 0.68
12  | 2024-04-29 04:09:34   | 2024-04-29 04:13:12   | 218          | 17.16     | 3.38        | 0.41       | 0.56
13  | 2024-04-28 21:59:34   | 2024-04-28 22:04:08   | 274          | 11.10     | 4.67        | 0.13       | 0.38
14  | 2024-04-29 19:19:34   | 2024-04-29 19:23:18   | 224          | 18.31     | 4.23        | 0.54       | 0.43
15  | 2024-04-30 00:10:34   | 2024-04-30 00:14:45   | 251          | 6.37      | 4.32        | 0.80       | 0.10
16  | 2024-04-30 17:34:34   | 2024-04-30 17:39:33   | 299          | 9.93      | 4.42        | 0.12       | 0.24
17  | 2024-04-30 11:47:34   | 2024-04-30 11:52:08   | 274          | 18.13     | 3.45        | 0.54       | 0.84
18  | 2024-05-01 02:21:34   | 2024-05-01 02:22:19   | 45           | 7.64      | 4.96        | 0.66       | 0.90
19  | 2024-05-01 21:36:34   | 2024-05-01 21:38:08   | 94           | 13.97     | 4.19        | 0.52       | 0.45
20  | 2024-05-01 18:29:34   | 2024-05-01 18:33:56   | 262          | 8.49      | 4.19        | 0.58       | 0.12
```
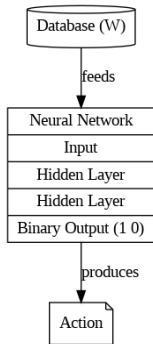
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