



PySCFabSimUI: Graphical User Interface for a Semiconductor Fab Simulator

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PySCFabSim

An open-source semiconductor fab simulator. Developed to accelerate research & development of AI-based dispatching & planning algorithms in the semiconductor industry.

User Interface

Configure parameters, visualize and monitor performance metrics of the simulation.

The screenshot displays the PySCFabSimUI interface with several key components:

- Schedule Simulator UI:** A top navigation bar with a 'CONTINUE SIMULATION' button.
- Lot status monitor:** A panel showing details for three lots (42665, 42666, 42667), including their step numbers, remaining time, and machine family.
- Machine status monitor:** A panel listing seven machines (77, 781, 782, 783) with their respective utilization rates, broken times, and preventive maintenance schedules.
- Comparing KPIs with W&B:** A dashboard with six line charts comparing 'Machine to date' and 'Single operations' across different metrics.
- Dispatcher comparison:** A panel for selecting reference algorithms (Machine, Group, Family) and defining criteria like 'First in - first out', 'Critical rate', and 'Earliest due date'.
- Breakpoint configuration:** A panel for setting up breakpoints for time period, lot dispatched, lot completed, and machine breakdown.
- Data collection:** A panel for selecting metrics to collect, such as machines, queues, and basic lot information.
- Update parameters on-the-fly:** A panel for adjusting release and breakdown intervals for various lot types (L1, L2, L3, L4, L5, M1, M2).

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