

# Elegant Circuit Placement Solutions through Reinforcement Learning and Complexification

Placement in Printed Circuit Boards (PCBs) and Integrated Circuits (IC) is concerned with identifying an optimised geometrical positioning of components on the layout area. Placement is known to be at the very least NP-complete, making the search for an optimal solution an intractable task using standard methods. In this research project, we will use reinforcement learning to learn fundamental placement techniques in a distributed and scalable manner. Subsequently through complexification collaboration or competitive strategies will naturally emerge leading to optimised circuit placement topologies. Check out [RL PCB](#) on GitHub for more information.

The digital era is built with ICs on PCBs, their design process is notoriously time-consuming and expertise intensive, thus automating the design process has strong practical implications.

**Pre-requisites:** Strong background in Python programming. Good understanding of Deep Learning and Reinforcement Learning.

**Student Interests:** Electronics, VLSI, Electronic Design Automation (EDA).

## Contact

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