

AI and database platform technology opening up next generation nanotech

Data-driven exploration platform for future materials

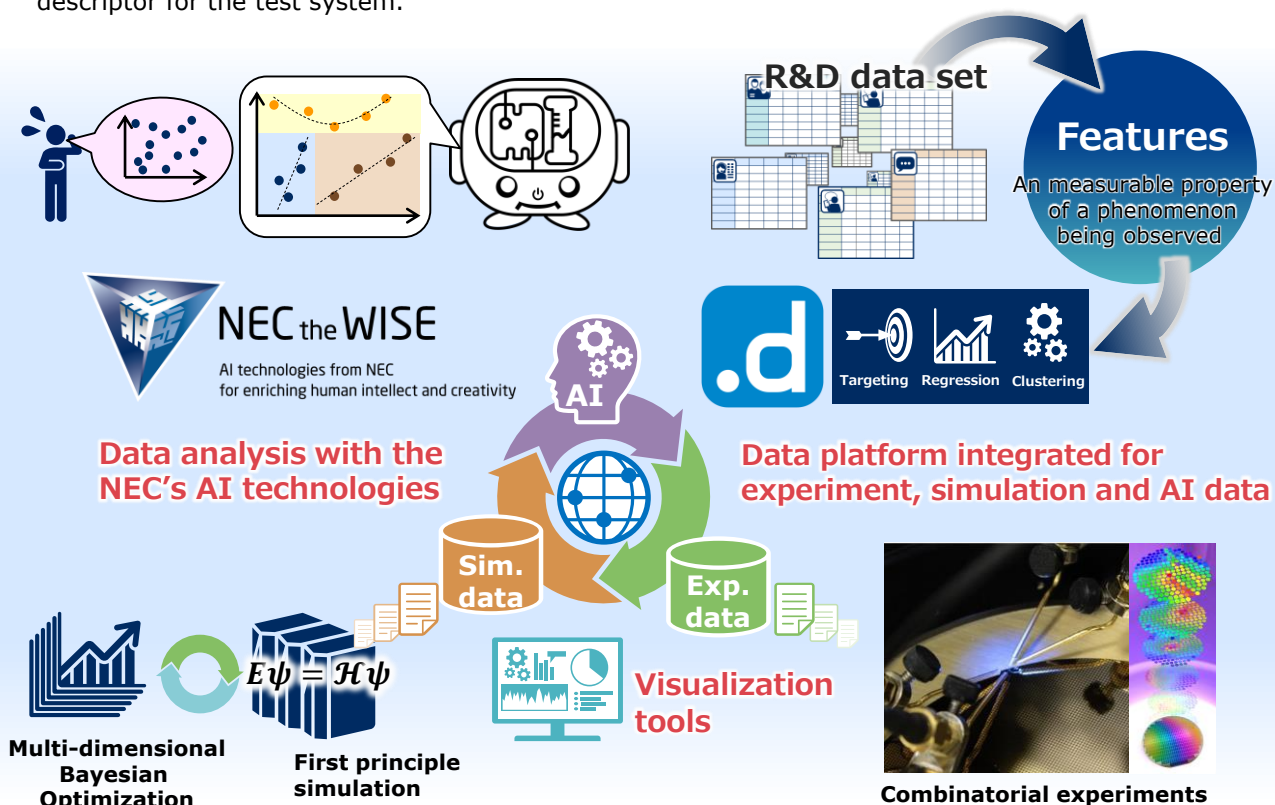
■ Heterogeneous Mixture Learning

It is one of the Explainable AI technologies that can give an analytical result in a simple and readable form. In HML, classification and regression are simultaneously optimized for mixed and bulky data set such as combinatorial experiments, physical property simulations etc. The analysis also gives reference to certain parameters possibly to be identified as a descriptor for the test system.

■ dotData

dotData provides a pioneering data science platform offering fully-automated machine learning and AI workflow: data preparation from relational database or multiple tables including various data types, feature engineering, model optimization, and integration of models into production systems.

<https://dotdata.com/>



■ Simulation-Based Physical Property Optimization

Once we define the physical property to be optimized, AI technology helps all the processes quickly and efficiently. Our Bayesian tree search algorithm can solve the optimization problem defined in a super-multidimensional search space.

■ Automated Materials Data Acquisition

The overarching issue in a data-driven materials development approach is how we acquire big data from a wide variety of materials. We utilize advantageous combinatorial technology that can exhaustively carry out experiments over possible combinations of candidate materials.

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