

Pressure-Rate artificial neural network = PRANN

Specific type of the pressure-rate history analysis based on the [Artificial Neural Network Regression](#).

This is the categorical concept and has many different implementations.

One normally split the solutions into the following sub-categories:

- Single-well
- Multi-well

and

- Pressure Rate
- Rate Pressure
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- Pressure Pressure

The **Rate** property in the above table could be a:

- production or injection rate
- surface of subsurface rate
- [total sandface rate](#) $q_i^\uparrow$ or [fluid rate](#) $q_L^\uparrow$ or component rate (oil, water or gas)

There is a large number of various permutations of input-output parameters which creates a big variety of model realizations and corresponding analysis.

One of the most useful [Production Analysis](#) can be conducted with the following [PRANN](#) design:

Producers BHP + Injector THP Producers Oil/Water/Gas surface rate + Formation Pressure P_e

See Also

[Petroleum Industry](#) / [Upstream](#) / [Production](#) / [Subsurface Production](#) / [Field Study & Modelling](#) / [Production Analysis](#)