

# 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

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