## 2.2 Artificial Intelligence

The factory is supposed to be monitored and controlled by Artificial Intelligence. While AI comprehend many ways of implementations, this project is supposed to use neuronal networks. This chapter will review neuronal networks.

### 2.2.1 Neuronal Network in general

So far, the factory is controlled by a PLC software. This software allows the developer to set clear instructions what the factory and each machine does. Instructions are worked through precisely. However, for a neuronal network that’s not the case. A program receives a set of data that reflect small entities of the factory. The program then needs to find connections and recognize patterns between the entities.

**“What fires together, wires together”** (Hebb, 1949) can be seen as neuronal networks slogan. The quote represents the idea how a neuronal network is built. The interesting thing is the contestation that hitting will ultimately connect. How is that meant?

A neuronal network is like the human brain. The network consists of many small entities, that are similar like the neurons. When raw data is received, there is no connection between the neurons. The computer then tries to find connections, which are compared to synapses. Hebb is describing the idea of how it’s done: Data often colliding, will have some kind of link.

The biggest issue is to provide the computer with the information. It is required to provide as much raw data as possible, without giving many rule bases.