TECHNOLOGY OFFER

Czech University of Life Sciences Prague

BABY WEEDS IDENTIFICATION SOFTWARE

TECHNOLOGY DESCRIPTION

- The implementation solves the problem of undesirable plants in cultural vegetation.
- The most widespread method of weed control is the current application of herbicides. This approach is environmentally challenging and cost-effective.
- The result of the solution is a software library enabling effective weed recognition in early growth stages, called “baby weeds” (Hanzlík, Pavlíček), with the first non-petals.
- The SW uses image processing and artificial intelligence for weed detection in the early stages of vegetative growth and recognition of weed species. Based on a combination of shape properties and texture, each plant is described by a set of measures. These rates are then used to distinguish individual plant species that is implemented by a neural network.

THE OWNER OF INTELLECTUAL PROPERTY

CULS

IP STATUS

SW – copyright

TECHNOLOGY READINESS LEVEL

Prototype

CONTACT

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UNIQUE FEATURES AND ADVANTAGES

- The solution works with weeds in the early stages of growth.
- It can recognizes individual weed species in the cover, which makes it possible to select the best method of weed elimination and to proceed as efficiently and ecologically as possible.

POTENTIAL APPLICATION AND USE

- The solution can be offered as a fixed component or an optional modular extension of agricultural machinery equipped with scanning technology, especially towing equipment for agricultural machinery.

WHAT WE LOOK FOR

- We are looking for partners from the area of production of agricultural machinery and equipment that are interested in putting the solution into practice

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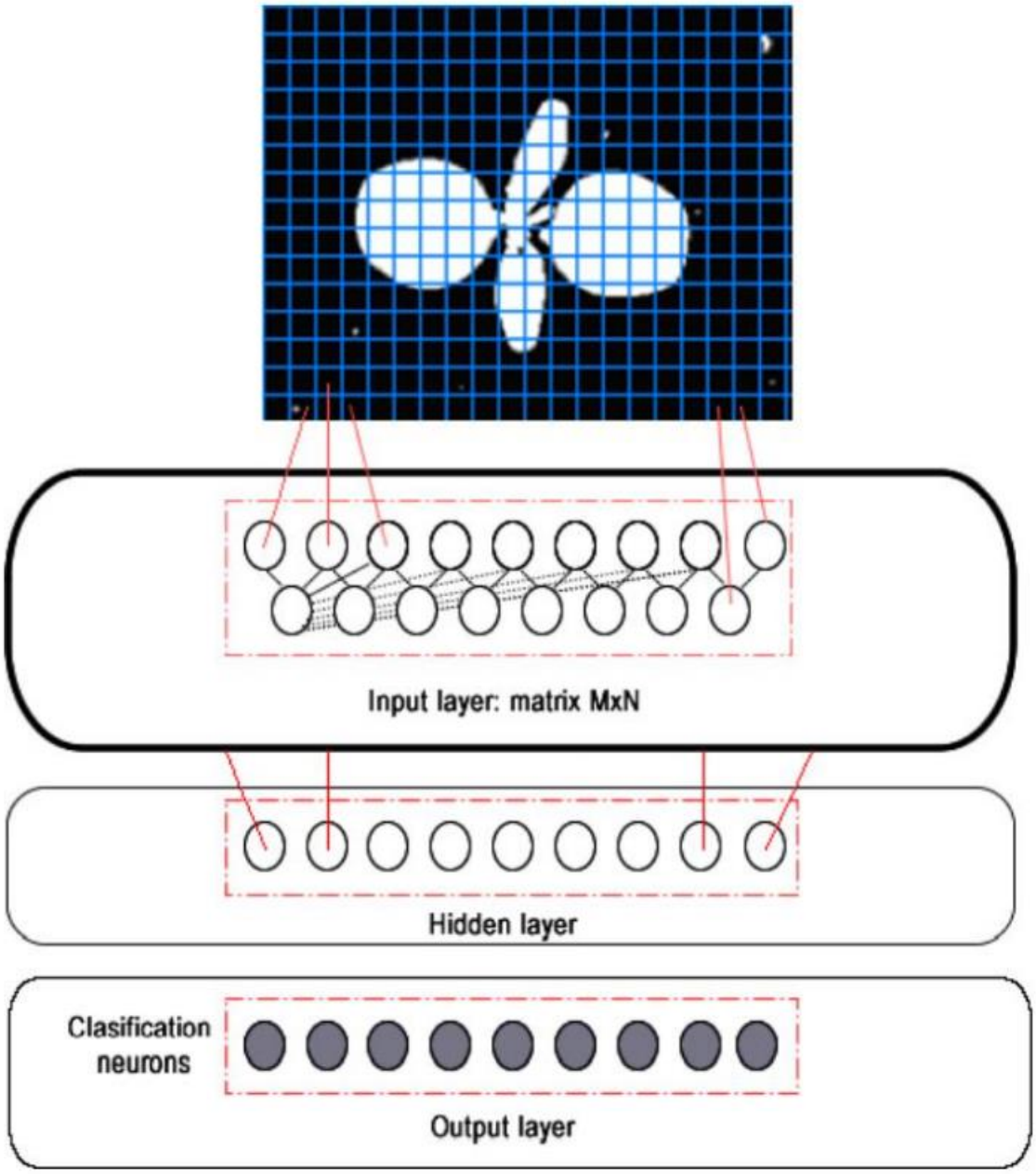

Figure 1: Scheme of plant recognition using a neural network

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Figure 2: Detection of individual weed species: sample use in a GUI application