Activation functions of neuron networks

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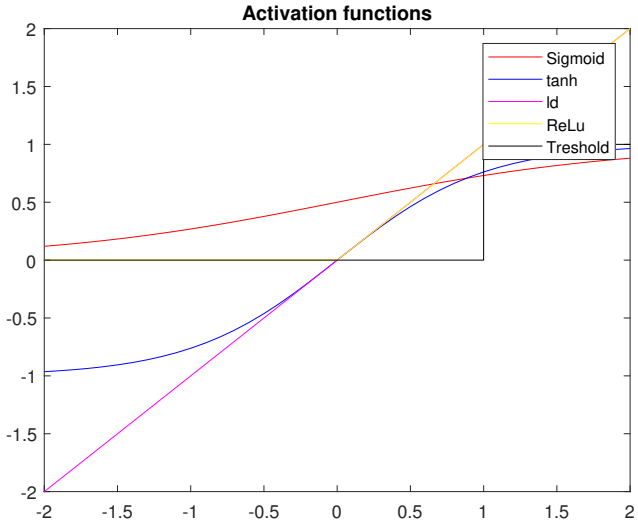
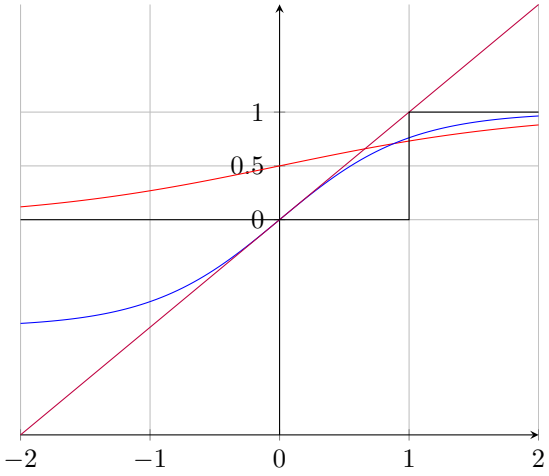
0.1 Izveidotais grafiks Matlab



0.2 Izveidotais grafiks ar TikzPictures



0.3 MATLAB kods

```
        x=-2:0.1:2;
sig=1 ./ (1 + exp(-x));

htan=tanh(x);

ld=x;

relu=log(1+exp(1).^x);
a = poslin(x)
x1=[-2,1,1,2]; tr=[0,0,1,1];



plot(x,sig,'r',x, htan,'b',x, ld,'m',x,a,'y',x1,tr,'k')
legend('Sigmoid','tanh','ld','ReLu','Treshold')
title('Activation functions')
```

0.4 LaTeX kods

```
        \documentclass{report}
\usepackage[utf8]{inputenc}
\usepackage{graphicx}
\usepackage{verbatim}
\usepackage{pgfplots}
\pgfplotsset{compat=1.8}

\title{Activation functions of neuron networks}
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\date{April 2019}

\begin{document}

\maketitle

\section{Izveidotais grafiks Matlab}
\includegraphics[width=10cm]{afnn.eps}
\section{Izveidotais grafiks ar TikzPictures}
\begin{tikzpicture}
    \begin{axis}%
    [
        grid=major,
        xmin=-2,
```

```
        xmax=2,
        axis x line=bottom,
        ytick={0,.5,1},
        ymax=2,
        axis y line=middle,
    ]
        \addplot%
        [
            red,%
            mark=none,
            samples=100,
            domain=-2:2,
        ]
        (x,{1/(1+exp(-x))});
         \addplot%
        [
            blue,%
            mark=none,
            samples=100,
            domain=-2:2,
        ]
        (x,tanh(x);
             \addplot%
        [
            purple,%
            mark=none,
            samples=100,
            domain=-2:2,
        ]
        (x,(x);
                \addplot%
        [
            black,%
            mark=none,
            samples=100,
            domain=-2:2,
        ]
        coordinates {
    (-2,0)(1,0)(1,1)(2,1)
    };
\end{axis}
\end{tikzpicture}
```