Can Machines Invent?
Calit2
Scott Raevsky
May 24, 2018
What Does It Mean to Be an Inventor?
When Have You Invented Something? – Problem Solved!
What if the Machine Solves the Problem?
“Creativity Machine” Patent

United States Patent

Thaler

Patent Number: 5,852,815
Date of Patent: Dec. 22, 1998

NEURAL NETWORK BASED PROTOTYPING SYSTEM AND METHOD

Inventor: Stephen L. Thaler, 1906 Autumn Vll., Blvd., St. Louis, Mo. 63146

Appl. No.: 79,730
Filed: May 15, 1998

\[ \text{out} = \frac{1}{1 + e^{-\sum w_i x_i + \theta}} \]
United States Patent

Inventor: Thaler, 12906 Autumn, Missouri, Mo. 63146

Filed: May 13, 1998

Patent Number: 5,852,815
Date of Patent: Dec. 22, 1998

NEURAL NETWORK BASED PROTOTYPING SYSTEM AND METHOD

\[ \text{out} = \frac{1}{1 + e^{-(\sum w_i x_i + \theta)}} \]
APPARATUS FOR IMPROVED GENERAL-PURPOSE PID AND NON-PID CONTROLLERS

Inventors: Martin A. Keane, Chicago, IL (US); John R. Koza, 25372 La Rena La., Los Altos Hills, CA (US) 94022; Matthew J. Streeter, San Jose, CA (US)
“Invention Machine” Patent

Apparatus for Improved General-Purpose PID and Non-PID Controllers

Inventors: Martin A. Keane, Chicago, IL (US); John R. Koza, 25372 La Rena La., Los Altos Hills, CA (US) 94022; Matthew J. Streeter, San Jose, CA (US)

Other Publications
Astrom, Karl J. and Hagglund, Tore. 1995. PID Controllers:

\[
\begin{align*}
\left[ \begin{array}{c}
T_p
\end{array} \right]
\left[ \begin{array}{c}
0.68631
\end{array} \right]
\left[ \begin{array}{c}
T_u
\end{array} \right]
\left[ \begin{array}{c}
1
\end{array} \right]
\left[ \begin{array}{c}
0.13031
\end{array} \right]
\left[ \begin{array}{c}
T_p
\end{array} \right]
\left[ \begin{array}{c}
1
\end{array} \right]
\left[ \begin{array}{c}
0.69897
\end{array} \right]
\left[ \begin{array}{c}
T_u
\end{array} \right]
\end{align*}
\]

\[
T_p = \text{abs} \left( \log \left( \text{abs} \left( T_r + K_u \right) \right) \right)
\]

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"Invention Machine" Patent

(12) United States Patent
Keane et al.

(10) Patent No.: US 6,847,851 B1
(45) Date of Patent: Jan. 25, 2005

(54) APPARATUS FOR IMPROVED GENERAL-PURPOSE CONTROL

(75) Inventors:

6,424,959 B1 7/2002 Bennett, III et al.
6,510,351 B1 * 1/2003 Blevins et al. .............. 700/18

OTHER PUBLICATIONS

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Can Machines Be Inventors? No Clear Answer Yet
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AI Computer Wrote This Movie, and It’s, Uh, Interesting

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Source: www.bigthink.com
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Thank you!

Scott.Raevsky@knobbe.com
949-721-7602