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New Gender-Spotting Software Could Keep Kids Safe Online

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One of the great dangers of the Internet is the veil of anonymity it offers — the people you meet and interact with online aren't always exactly who they appear to be.

New software created by researchers at the Stevens Institute of Technology in Hoboken, N.J., however, might hold the key to alerting users to potential Web-based deceptions.

Developed by Koduvayur Subbalakshmi, Rajarathnam Chandramouli, and Na Cheng, the program has the ability to analyze text and make an educated guess regarding the gender of its writer.

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The project, Subbalakshmi said, was born in response to situations like that of 13-year-old Megan Meier, who committed suicide in 2007 after her classmate's mother bullied her online in the guise of a 16-year-old boy.

"That was our motivation," Subbalakshmi told InnovationNewsDaily. "We wanted see if it was possible to look at text and tell if people are faking or lying online."

In order to tackle the larger problem of Internet fraud, the researchers decided to begin by honing in on one particular issue: gender deception.

The researchers compiled 157 gender-specific psycholinguistic cues — previously identified stylistic traits attributed to either male or female writers, such as punctuation use or sentence length — from a range of scientific studies.

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Using that data, the researchers built a mathematical model that could determine whether the author of a specific piece of writing was either male, female or neutral (meaning the piece is written in a stylistically ambiguous voice).

Finally, they were able to create software based on the model, allowing users to either upload or paste in text for gender analysis. The tool — which Subbalakshmi said is meant mainly for use with "spontaneous communication" such as instant messaging and email — is now available on Stevens' website. (You can try it for yourself here.)

According to Subbalakshmi, the program is currently about 85 percent accurate, but still has plenty of room to improve. Her hope is that the software's textual evaluation will become more nuanced and intuitive as more people test it out.

"We've provided an option where users can say whether the answer [the software has provided] is correct or not," Subbalakshmi said. "[It allows us to] gather more data, and we will be refining the program that way."

While the software is somewhat limited in its current form, Subbalakshmi foresees a wide range of potential uses for the technology. One example she suggested was a plug-in for browser-based instant messaging systems such as Facebook Chat or Google Talk.

"Let's say a person has met someone online and they're talking, and it looks like the person is whatever gender they say they are," Subbalakshmi explained. "But this program will run in the background, and if there's a problem it could alert them with a pop-up that says, 'You might want to be careful. We think there's an 80 percent chance this person is not what they say they are.'

"That way, the kids can be alerted and their parents will feel safer [letting them browse the Web]."

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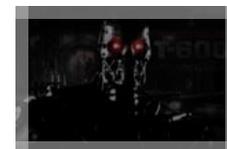11 Technologies in Danger of Going Extinct

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