



UNIVERSITY OF  
TORONTO



# WHAT DOES SPEECH REVEAL ABOUT OUR HEALTH?

## U OF T STARTUP FINDS 400 SUBTLE NEUROLOGICAL HEALTH MARKERS

Hidden clues in the way you speak can indicate health problems long before an official diagnosis is made. These include how fast you talk, how long you pause, which words you choose—even tiny wobbles in the vibration of your voice, too subtle for the human ear.

Faculty of Arts & Science PhD student Katie Fraser discovered hundreds of speech and language markers for neurological health. Now, she's a partner in WinterLight Labs—a new business venture with her colleagues at the Department of Computer Science, Liam Kaufman, Maria Yancheva and assistant professor Frank Rudzicz, who is also a rehabilitation scientist at the University Health Network. With combined expertise in linguistics and machine learning, their team has built a tool that pinpoints early signs of Alzheimer's disease and dementia with very high precision.

Coming to market soon, the tool will help clinicians track patients' health objectively and start therapy promptly. Eventually, WinterLight plans to extend the technology to tests for depression and anxiety. "Speech and language are among the most accurate lenses into somebody's state of mind," says Rudzicz.

**WinterLight Labs is one of more than 150 research-based startups launched in the last five years at U of T. Learn more at [utoronto.ca](http://utoronto.ca)**

BOUNDLESS