**SfTI– Te Hiku Media funded PhD position at the University of Auckland**

**Application Form and Research Proposal**

Please ensure all sections are completed.

**Closing Date : 15th February 2022, 5:00pm**

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| **Section I – Student Details** | |
| **Student Name** |  |
| **Email** |  |
| **Contact Number** |  |
| **Iwi affiliation(s)** |  |
| **Intended start date** |  |

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| **Section II – Research proposal** |
| **Project Title:** Developing culturally-congruent emotional speech recognition framework for te reo Māori |
| **Abstract**: Many of us adapt the way we talk so that Alexa/Siri and similar Human-Computer Interaction (HCI) systems understand us. Imagine having to make such adjustments in our emotion expressions as well! Latest HCI systems understand (recognise) users' emotions from speech. Such systems are receiving strong interest due to the demand for contactless interaction. They are being introduced rapidly in Aotearoa as well. With speech technology research concentrating on a few well-resourced languages (99 out of 7097 world languages) like American-English, emotion recognition models are trained only on these languages. Speech technology used in HC I is thus biased against speakers of under-resourced languages like te reo Māori. This project aims to address this bias by developing a culturally-congruent Speech Emotion Recognition (SER) system for te reo. Before we proceed to technology development in Māori emotions, mātauranga Māori via feedback from te reo speakers will guide the process of defining emotions specifically in te reo, rather than using their seemingly-close English equivalents. This consultation with te reo speakers will form the basis for developing an emotional speech framework for te reo, and lead to testing the framework on a SER system. The developed te reo Māori emotional speech framework will lead way to speech technology for Aotearoa from Aotearoa which can be used by technology developers who currently do not have Aotearoa-specific frameworks to use. This will be the first research if its kind into indigenous emotions technology, thereby paving way for other languages to develop frameworks following a culturally-congruent approach. |
| **Research Proposal:**  Include an outline of your proposed research approach for the above-described research. This does not need to be a fully developed proposal but could include your expertise (methods or approaches you use/are interested in using), community connections and research ideas/plan.  (upto 5 pages) |
| **Te Hiku Media and Papa Reo Vision:**  How does the proposed research and/or people involved in the project align with Te Hiku Media and the Papa Reo project’s vision, guiding principles, and/or strategic focus areas[[1]](#footnote-1) ?  (upto 1 page) |
| **Vision Mātauranga:**  Explain in your own words how this project aligns with Vision Mātauranga[[2]](#footnote-2).  (upto 1 page) |
| **About you:**  Explain why you think you are suited to do this project.  (upto 1 page) |

1. See: <https://papareo.nz/> for more information on the Papa Reo project. [↑](#footnote-ref-1)
2. https://www.sftichallenge.govt.nz/for-researchers/vision-matauranga/ [↑](#footnote-ref-2)