PROJECT # 20

SUPERVISOR/S:	AProf Te Taka Keegan & David Bainbridge
PROJECT TITLE:	A new reo Māori AI Voice
FIELD:	Natural Language Processing
DIVISION/SCHOOL:	HECS - Au Reikura School of Computing and Mathematical Sciences
PROJECT LOCATION:	Hamilton
EXTERNAL PARTNER:	Te Hiku Media

PROJECT ABSTRACT:

This research involves creating and documenting the process in creating a new reo Māori Artificial Intelligent voice. Current Natural Language Processing Technology offers multiple voices for many spoken applications, but the commonly available synthetic voices typically work very well for resource rich languages but often deliver poor pronunciation for the smaller resourced languages such as te reo Māori. This pronunciation issue has recently been overcome by Te Hiku Media, (https://tehiku.nz/te-hiku-tech/dev-lab/43905/te-reo-maori-synthetic-voice-running-on-an-assistive-device) who have produced a high quality reo Māori synthetic voice. The synthetic voice that Te Hiku Media has produce is a distinctly Northern dialect te reo Māori voice. What if the iwi of Waikato or the iwi of Maniapoto wanted to create their own distinctive synthetic voice? This project will investigate what is needed to create another synthetic voice. In all likelihood it will involve using the technology that Te Hiku has created and local reo Māori speakers.

STUDENT SKILLS:
- The ability to manage projects and work with other people.
- Some programming skills may be required in the building of the synthetic voice
- A working knowledge of te reo Māori is desirable but not essential.

PROJECT TASKS:
1. Reviewing literature around creating a synthetic voice
2. Meeting the relevant people (Te Hiku Media, and iwi speaker) and determining what is needed to produce a voice, especially in terms of quality and length of sound recordings. Preliminary meetings will have already occurred by the supervisor, this is just giving the student a chance to meet the relevant players.
3. Undertake/assist with approximately 30 hours of recordings. The template and appropriate format, content, length and quality will have already be determined.
4. Creating the new voice
5. Testing the voice, the level of testing will be depend on the time remaining in the project.
6. Documentation, including the process, a final report and a summer scholarship poster.

EXPECTED OUTCOMES:
- Student's Research Poster (as per clause 6 of the Scholarship regulations)
- Documentation on the steps needed to be undertaken to produce a synthetic voice for te reo Māori.
- A new reo Māori synthetic voice