

Aaron Craig's CV

CONTACT INFO	Email: aaroncraig@protonmail.ch Website: github.com/craigthelinguist	2/21 Pirie Street Mt. Victoria, Wellington
SKILLS	Programming Languages: Java, C, Python, Prolog, Haskell, SQL Modelling Languages: Alloy, UML, LTSA, JAPE Markup Languages: Latex, Markdown, JSON, XML Libraries & Frameworks: JUnit, pandas, matplotlib, numpy, curses, OpenGL, XStream, Berkeley Socket API, Swing, Unity Protocols: HTTP, DNS	
JOB HISTORY	Victoria University, Wellington <i>Research Assistant</i> Oct 2015 – Current <ul style="list-style-type: none">Contributed to the Wyvern interpreter: github.com/wyvernlang/wyvernHelp design a logic for specifying and verifying architectural constraints.My supervisor was <i>Alex Potanin</i>. New Zealand Registry Services, Wellington <i>Research Intern</i> Oct 2014 – Mar 2015 <ul style="list-style-type: none">Analysis and summary of DNS data using pandas, matplotlib.Detection and classification of botnet domains using clustering techniques.Helped gather and verify data used to generate a map of the NZ internet's routing topology. Victoria University, Wellington <i>Sessional Assistant & Tutor</i> Mar 2014 – Oct 2015 <ul style="list-style-type: none">Marking tests and assignments; invigilating.Running tutorials, labs, and helpdesks.Classes tutored: Intro to Computer Science; Engineering Modelling & Design; Data Structures & Algorithms II; Formal Foundations of Programming. Converga Ltd., Petone <i>Business Processing Clerk</i> Nov 2013 – Mar 2014 <ul style="list-style-type: none">Data entry and verification.Sorting files by hand. (I did this using radix sort) Target Furniture, Porirua <i>Temp, Storeperson</i> Nov 2010 – May 2013 <ul style="list-style-type: none">Furniture removal, delivery, assembly, and repair.Managing inventory, driving forklift.Training temps.Basic customer service.	
INTERESTS & PROJECTS	Natural Language Processing. One of my dreams is to make computers that can recognise and produce human language. I have made several corpora for Māori and NZ English. At NZRS I looked at detecting botnet activity in DNS by classifying domain names. As part of that I gave a presentation at the 2015 NZ Internet Research Forum. Programming Languages. Exploring the space of formal languages helps shed light on the mysteries of natural languages. Furthermore, the role of language in software development is critically underappreciated. I want to develop expressive, safe ways for programmers to write software. I'm a contributor to the Wyvern project. I'm also interested in compiler design, static analysis, and type systems.	

Visualisations. At NZRS I helped verify data used to generate a map of the NZ internet. I've written several interactive visualisations for algorithms (A*, Kruskal's Knight's Tour, KNN), cellular automata, and Turing machines. These are all much easier to explain in pictures than in words or mathematical formalism, which can be cumbersome and unintuitive.

Education. I would like to see NZ education offer more in the way of computer science and logic for high school students and would be excited to work towards such goals. I like the idea of using history-themed games to convey the geopolitics of an era.

Game Development. Each year I attend Pixeljam, a 48hr gamejam in Wellington. Over the years we've made several flavours of game such as: a lane-runner, a Mario-style platformer, and a 3d horror game. A secret desire of mine is to see more NZ-themed videogames, particularly about NZ history.

EDUCATION

Victoria University of Wellington, New Zealand

- STAR Programme 2011
- BA Linguistics & Philosophy 2012
- BSc Computer Science & Mathematics 2013 – Current
- BSc Hons. Computer Science 2016 – Current

Tawa College, New Zealand

- NCEA Level 3 (Merit endorsement) 2011

SCHOLARSHIPS & AWARDS

Victoria University of Wellington

- Victoria Achievers Scholarship 2012
- Dean's List Current

Tawa College

- Katherine Mansfield Award (English) 2011
- Leanne Dixon Cup (History) 2011
- NZQA Outstanding English Scholarship 2011

LANGUAGES

English
Māori (Elementary)

ABOUT ME

I was born in Porirua and live in Wellington. I like creative writing and reading history, philosophy, and fiction. For two years I boxed as an amateur but nowadays just like to watch. My tribe is Muaūpoko, in Horowhenua.

REFERENCES

Available upon request.