# Aaron Craig's CV

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SKILLS

**Languages**: Java, C, Python, Haskell, Prolog, SQL, Bash scripting, XML, JSON, Latex, Alloy, UML, LTSA.
**Libraries & Frameworks**: JUnit, pandas, matplotlib, numpy, curses, OpenGL, XStream, Berkeley Socket API, Swing, Unity.
**Protocols**: HTTP, DNS.

JOB HISTORY

**New Zealand Registry Services**, Wellington
*Research Intern*                                                                Oct 2014 - Mar 2015
- 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
*Sessional Assistant & Tutor*                                                    Mar 2014 - Current
- 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
*Business Processing Clerk*                                                       Nov 2013 - Mar 2014
- Data entry and verification.
- Sorting files by hand. (I did this using radix sort)

**Target Furniture**, Porirua
*Temp, Storeperson*                                                              Nov 2010 - May 2013
- Furniture removal, delivery, assembly, and repair.
- Managing inventory.
- Driving forklift.
- Training temps.
- Assisting and greeting customers.

INTERESTS & PROJECTS

**Natural & Programming Languages**. I'm interested in the structure of languages. This includes: compilers, programming language design, and natural language processing. I have made several corpora for Māori and NZ English. I have my own SAT solver that I've been tinkering with. At NZRS I did research into detecting botnets by classifying domain names. As part of that I gave a presentation at the 2015 New Zealand Internet Research Forum.

**Visualisations.** At NZRS I helped verify data used to generate a map of the New Zealand internet. I have implemented several interactive algorithm visualisations (A*, Kruskal's, Knight's Tour, KNN).

**Computer Science Education.** My work in computer science pedagogy keeps me sharp in a diverse number of areas. I am writing an introductory textbook of computer science, partly motivated by my experience as a student.

**Game Development**. Each year I attend Pixeljam, a Wellington-based gamejam. We've made: a 2d lane-runner, a 2d platformer, and a 3d horror game. Recently I started working on a 2d game

engine in Java, built atop OpenGL.

EDUCATION

**Victoria University of Wellington**, New Zealand
- STAR Programme — 2011
- BA Linguistics & Philosophy — 2012
- BSc Computer Science & Mathematics — 2013 - Current

**Tawa College**, New Zealand
- NCEA Level 3 (Merit endorsement). — 2011

SCHOLARSHIPS & AWARDS

**Victoria University of Wellington**
- Victoria Achievers Scholarship — 2012

**NZQA**
- Outstanding English Scholarship — 2011

**Tawa College**
- Katherine Mansfield Award (English) — 2011
- Leanne Dixon Cup (History) — 2011

ABOUT ME

I was born in Porirua and live in Wellington. I like reading history, philosophy, and literature. I did amateur boxing for about two years but nowadays just like to watch.

REFERENCES

Available upon request.