Aaron Craig's CV

CONTACT INFO

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SKILLS

Programming Languages: Java, C, Python, Haskell, Prolog, SQL
Modelling Languages: Alloy, UML, LTSA
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
Research Assistant   Oct 2015 – Mar 2016
- Contribute to the Wyvern interpreter: `github.com/wyvernlang/wyvern`
- Design a logic for specifying and verifying architectural constraints.
- My supervisor was *Alex Potanin*.

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 – Oct 2015
- 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 several flavours of game, such as 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

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

LANGUAGES

English
Māori (Elementary)

ABOUT ME

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

REFERENCES

Available upon request.