

David O'Donohue

Canberra, ACT

0401 609 112

david.odonohue@outlook.com

<https://www.linkedin.com/in/david-odonohue/>

<https://github.com/davidodonohue>

Personal Projects

TutorHelper

TutorHelper contains several python scripts which automate repetitive tasks involved in tutoring, such as creating feedback templates and sending the finished product en masse.

<https://github.com/davidodonohue/tutorhelper>

Tic Tac Flow

Tic Tac Flow is a graphical implementation of tic tac toe using the tkinter package. It features an AI opponent implemented using the negamax algorithm with alpha-beta pruning as an optimisation.

<https://github.com/davidodonohue/tic-tac-flow>

Logicosm

Logicosm is a command line interface python program which gamifies mathematical practice and

encourages pattern seeking in children.

<https://github.com/davidodonohue/logicosm>

XOR-Encryption

XOR-Encryption is a python script which can encrypt and decrypt files and folders using the XOR operator on the bytes of a file and a key, which can be chosen or randomly generated.

<https://github.com/davidodonohue/xor-encryption>

Neuroevolution

Neuroevolution is a python program which uses an evolutionary algorithm to train neural networks through mutation across successive generations.

<https://github.com/davidodonohue/neuroevolution>

Experience

Science Mentors ACT, Computer Science Mentor

Jan 2019 – Present

In this volunteer role, I am mentoring a grade 9 student through a research project in computer science. We wrote a scissors-paper-rock bot which uses machine learning to exploit the inability of humans to choose moves which are truly random. We also described a mathematical conjecture which revealed insights into the assumptions of the machine learning framework.

Veritec, Associate Consultant

Jan 2019 – Present

I worked autonomously to support other project members to deliver a detailed design document to

the client. I also created and ran a workshop on inter- and intra-personal skills.

Australian National University, Computer Science Tutor

Jul 2017 - Present

I am responsible for helping classes of first year students to successfully complete the course, as well as marking their assignments and providing them with feedback. I independently created video tutorials on the topics most students found the hardest

(https://www.youtube.com/channel/UCalf_ITbJtXeo3mWtMMVRkQ), and am consistently a top contributor on the online forums. In the second semester of 2018, my class showed the greatest improvement between their average performance

on the mid-semester exam and their average performance on the final exam.

PsychologyWorks, Psychologist
Sep 2013 – Dec 2013

Big Improvements Tutoring, Tutor
Jul 2016 – Jul 2017

University of Tasmania, Provisional
Psychologist
Jul 2012 – Jun 2013

Primary caregiver for infant
Jun 2016 – Dec 2018

University of Tasmania, Research Assistant
Jul 2012 – Feb 2013

Department of Health and Human Services,
Provisional Psychologist
Jan 2014 – Jan 2015

References

Ekaterina Lebedeva
0478 530 478

Ekaterina is a lecturer at ANU and a recipient of the EW Beth Dissertation Prize. She employed me to tutor COMP1100 at ANU.

Prithvi Reddy
0468 776 945

Prithvi is a PhD candidate at ANU and a co-founder of thaum.io. He tutored COMP1100 at ANU with me.

Kristen Webb-Foss

0439 383 721 kristenalicewebb@gmail.com

Kristen is the manager of Anglicare's Disability Clinical Team. She was the Senior Practitioner for the disability sector when I was working there.

Martine Fourie

0401 134 254

Martine is a speech pathologist and a psychologist who worked with me in the disability sector.

Education

Master of Psychology (Clinical) (2012 – 2015)

Bachelor of Psychology with Honours (2008 – 2011)

Skills

- Python
- SQL
- Data cleaning
- Data visualisation

- Haskell
- Git
- Java
- C

Extras

- Baseline security clearance
- Introduction to Computer Science and Programming using Python (Certificate from MIT through edX)
- Boyapati Computer Science and Mathematics Prize (2015)

- Commendation from the Deputy Dean of Science Education (2015)
- Mensa Australia Member
- Golden Key International Honours Society Member