

Lachlan Waugh

Security Engineer

 Sydney, Australia

 lwaugh.io

 lachlan-waugh

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EXPERIENCE

Casual Academic Tutor

Feb 2022 - Present 

UNSW Sydney

Sydney, Australia 

- Tutored security courses: COMP6447 (System & Software Security Assessment), COMP6443 (Web Apps Security & Testing), & COMP6441 (Security Engineering)
- Taught topics ranging from the dangers of implicit trust and authentication, to technical skills such as heap overflows, ret2libc and reverse engineering.

Cyber Risk (Identity & Access Management) Intern

Nov 2021 - Feb 2022 

Deloitte

Sydney, Australia 

- Crafted architecture proposals and documentation for the transformation of the existing single-sign on and federated identity infrastructure.
- Improved the scalability and security of the IAM solutions of the client, by replacing the current Oracle-based IAM stack with OAuth, and OIDC (M365).

Mathematics and Computer Science Tutor

Jan 2018 - Dec 2020 

Self Employed

Sydney, Australia 

- Liaised with parents & students to develop uniquely adapted lesson plans to suit students individually. Assisted students from high school to undergraduate level.

EDUCATION

B.Sc. in Computer Science w/ Distinction

Feb 2019 - Dec 2022 

B.Sc. in Mathematics w/ Distinction

Sydney, Australia 

University of New South Wales

- 78 (Distinction) Weighted Average Mark
- Majored in Security Engineering

Noteworthy courses

- | | |
|--|-------|
| • MATH3411: Information, Codes and Ciphers | 91/HD |
| • COMP6845: Extended Digital Forensics & Incident Response | 88/HD |
| • COMP9447: Cloud Security Engineering Workshop | 86/HD |

PROJECTS

Dependalyzer

Built in TypeScript, NodeJS, and React   

- A tool to identify and remediate software dependency-based attacks.
- Developed the scanning logic of the program, which asynchronously detects vulnerabilities in packages as they're pushed or merged to the main branch.
- Also contributed to the back-end database integration, which was used to propagate any issues found by the scanners to the front-end dashboard.

PyFuzzer


Built in Python 

- A simple, blackbox Fuzzer used to generate input to identify software vulnerabilities.
- When provided with a program and sample input, will attempt to mutate that input, in a way that will cause the provided program to crash, or act in unintended ways.
- Developed all of the logic: the bootstrap which detects the type of the sample input, the harness which handles the interaction between the generated input and the sample program, and the strategies which are the ways we modify the sample input.

More projects can be found [here](#)

CONTACT ME

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 I don't want my phone number publicly on my website. Please reach out, and I can provide it!

LANGUAGES

- C, C++, C#, Java
- Type/JavaScript, React
- Python, Bash Scripting

SKILLS

- Docker, Git, Linux
- GDB, IDA, Radare2
- Volatility, Wireshark

VOLUNTEERING

North Beaches Cleanup Crew

 Nov 2019 - Dec 2021

- Collaborated with community
- members to gather litter from across the Northern Beaches.
- The waste collected was organised
- and used in statistical analysis research by the NSW Government.

EXTRACURRICULAR

Societies @ UNSW

- Security
- Computer Science and Engineering
- Competitive Maths and Programming

Interests

- Working out, running
- Capture the Flags, programming
- Basketball