

Thomas Hill Almeida



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tommoa



tommoa.me



Projects

relibc | Maintainer

- C standard library written entirely in **Rust**
- wrote the **stdio.h** implementation
- 4th largest contributor to date

small | Author & Inventor

- stack-based string implementation in **Rust**
- usage in **ion shell** increased performance by **30%**

process memory injector | Author & Inventor

- library for manipulating the memory of other processes in **Rust**

Experience

University of Western Australia | research

Supervisor: Prof. Linqing Wen | 2020

- optimized gravitational wave detection pipeline **SPIIR** on the **OzStar** supercomputer in **C,CUDA** and **Python**
- analyzed computational cost of procedures to improve runtimes

University of Western Australia | unit tutor

February 2020 – June 2020

- recieved **commendation** for tutoring 30 students in data structures and algorithms using **Java** under **Prof. Amitava Datta**

Arista Networks | software engineering intern

Supervisor: Alex Webster | November 2019 – February 2020

- created a custom Linux image using **Yocto** for network enabled bootable USB drives
 - reduced theoretical fix-time for devices affected by corrupted images by approximately 1 day
 - reduced theoretical regression test time by 10 minutes
- developed tools in **Python** to search for vulnerabilities in Arista operating systems
 - opened approximately 1500 bugs to be triaged

Arista Networks | software engineering intern

Supervisor: Alex Webster | January 2019 – February 2019

- developed tools in **Python** to discover layer 1 network topology, allowing for previously impossible topology analysis
- researched and developed methods in **Python** for creating network-accessible USB boot drives to reduce testing time

Talis Consultants | undergraduate technician

Manager: Granger Bennett | 2016 – 2018

- developed noise management solution **Nexus** in **C#**
 - in use by Fortescue Metals Group, Alcoa and others in daily operations

Education

Masters | **Software Engineering**

University of Western Australia | 2019–Nov 2020

- GPA: 6.0
- WAM: 75.2%

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| Software Design Project | 90% |
| Computational Modelling | Distinction |
| Computer Vision | Distinction |
| Risk, Reliability and Safety | Distinction |
| Testing and Quality Assurance | Distinction |

BSc | **Software Engineering**

University of Western Australia | 2017–2019

- GPA: 5.5
- WAM: 70%

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| Data Structures and Algorithms | 89% |
| Digital Embedded Systems | 91% |
| Networks and Security | 91% |
| High Performance Computing | Distinction |

Other

Computers

- UWA Programming Competitions Society

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| vice president | 2019 – 2020 |
| secretary | 2020 – Present |
| committee member | 2018 – Present |
| lecturer | 2017 – Present |
| competitor | 2017 – Present |
- University Computer Club

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|----------------|-------------|
| treasurer | 2019 – 2020 |
| vice president | 2018 – 2019 |
- International Collegiate Programming Competition
 - Divisionals finalist 2019
 - Divisionals finalist 2018
 - Divisionals finalist 2017

Music

- Audition choirs
 - The Winthrop Singers

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| bass section | 2017 – Present |
| bass section leader | 2020 – Present |
 - West Australian Chamber Choir

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| bass section leader | 2019 – 2020 |
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References available upon request