Thomas Hill Almeida

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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 | 2019–2020
- GPA: 6.0
- WAM: 75.2%

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

BSc | **Software Engineering**
University of Western Australia | 2017–2019
- GPA: 5.5
- WAM: 70%

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

Other

Computers

- UWA Programming Competitions Society

vice president	2019
secretary	2020
committee member	2018 – 2020
lecturer	2017 – 2020
competitor	2017 – 2020

- University Computer Club

treasurer	2019
vice president	2018

- International Collegiate Programming Competition
  - Divisionals finalist 2019
  - Divisionals finalist 2018
  - Divisionals finalist 2017

Music

- Audition choirs
  - The Winthrop Singers

bass section	2017 – Present
bass section leader	2020

  - West Australian Chamber Choir

bass section leader	2019, 2020

References available upon request