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

Arista Networks | software engineer
Manager: Alex Webster | 2021 –
- helped development of operating systems for Arista switches and patchers

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

Education

Masters | Software Engineering
University of Western Australia | 2019–2020
- GPA: 6.2
- WAM: 77.6%

Masters Thesis	91%
Software Design Project	90%
Cloud Computing	87%
Artificial Intelligence	High Distinction
Computational Modelling	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 – 2020
bass section leader	2020

  - West Australian Chamber Choir

bass section leader	2019, 2020

References available upon request