

# 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 | 2019–2020

- GPA: 6.2

- WAM: 77.3%

Masters Thesis	91%
Software Design Project	90%
Cloud Computing	83%
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 – Present
    - bass section leader | 2020
  - West Australian Chamber Choir
    - bass section leader | 2019, 2020

References available upon request