

Hanif Bin Ariffin

Programmer

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🐙 [hbina \(https://github.com/hbina\)](https://github.com/hbina)

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[Personal Blog \(https://hbina.github.io/\)](https://hbina.github.io/)



Highly experienced and independent problem solver. Contributes to various widely used open source projects

WORK EXPERIENCE

Dec 2020 - Feb 2022

Fullstack developer at Setel

📍 **Malaysia,**

Responsible for implementing and maintaining the loyalty system for self-checkout, the inventory and the store ordering system

- Uses TypeScript for backend
- Uses React + TypeScript for frontend

Feb 2022 - Jul 2022

Senior Fullstack Developer at Globelise

📍 **Singapore,**

Designed and implemented the backend system for a global hiring management system and 3rd party payroll integrations.

- Uses Rust + Actix for backend
- Uses React + JavaScript for frontend
- Implemented various 3rd party integrations

PROJECTS

MIPS processor in VHDL

🔗 https://github.com/hbina/mips_processor (https://github.com/hbina/mips_processor)

Skills acquired: VHDL | Altera Quartus II Simulator

Circuit schematic for a basic MIPS processor that supports forwarding unit and branch protection in VHDL

- Support forwarding unit
- Support branch protection

iso_14977

🔗 https://github.com/hbina/iso_14977 (https://github.com/hbina/iso_14977)

Skills acquired: Rust | EBNF

Fully compatible ISO 14977 EBNF parser in Rust

- Code almost maps directly to the specification using the nom parsing library

radish

🔗 <https://github.com/hbina/radish> (<https://github.com/hbina/radish>)

Skills acquired: redis | golang

Multithreaded implementation of redis in Golang for learning purposes

- Close to 90% of reference redis performance without any optimizations
- Discovered a crash in redis while developing this
- Passed unit/types/string, unit/types/zset, unit/types/set
- Supports block and non-blocking commands

Fatuous

 <https://github.com/hbina/fatuous> (<https://github.com/hbina/fatuous>)

Skills acquired: C++ | OpenGL

Basic 3D renderer

- Able to load simple 3D models and skyboxes (Uses ASSIMP)
- Support object culling, tessellation and shadows

VOLUNTEER

Contributor at Godot

- Current

Multi-platform 2D and 3D game engine written in C/C++14

- Debugged various memory issues and crashes
- Implemented and fixed various UI features

Contributor at Rust Coreutils

- Current

Cross-platform Rust rewrite of the GNU coreutils

- Reimplemented tr to be fully compatible with GNU tr (passes all tests)
- Various improvement to ls
- Various improvement to more
- Top 50 contributor of the project

Contributor at redis

- Current

Redis is an in-memory database that persists on disk. The data model is key-value, but many different kind of values are supported: Strings, Lists, Sets, Sorted Sets, Hashes, Streams, HyperLogLogs, Bitmaps.

- Discovered and help fix a crash involving ZINTER of SET and ZSET
- Removed redundant checks when using small integers (slight performance improvement)
- Some fixes to usage of C string formatter
- Suggested a change to the implementation of sds to be more space efficient at the cost of some complexity (rejected)

Contributor at Lapce

- Current

Open source. Quick from launch to every keystroke, and batteries included. Compatible alternative to Microsoft's VSCode

- Implement some UI features like collapsing panels and search panel preview
- Fixed some memory leaks with scratch documents
- Show unique paths to disambiguate multiple files with the same name
- Fix bad initialization of mouse pointers in the about modal

EDUCATION

BSc Computer Engineering at University of Ottawa

2015 - 2020