

Martin Chang

Software Developer/Team Lead

Education

2015 - 2021

Computer science and engineering (B. Eng.)

National Sun-Yet-Sen University
Special Talent Program

Graduation project: „HTM based Agent in standard RL Environment and Beefing up Framework Performance“.

Skills

C++ 12+ Yrs

Linux 10+ Yrs

Concurrent/HPC programming 6+ yrs.

OpenCL 4+ yrs.

(CERN ROOT) Big Data analysis 2+ yrs.

Language skills

Chinese Native

English (TOEIC) 815

Esperanto (Est. KER) C1

Additional skills

- ▶ Lock free programming
- ▶ Lua, Python, Common Lisp
- ▶ Qt, PostgreSQL, OpenDHT
- ▶ OpenBSD, PBR Rendering

 github.com/marty1885

 clehaxze.tw

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Profile

I started coding at a very young age. With 13+ years of C++ experience. Now following the latest C++ standard and TS. I'm interested in HPC and systems programming. I am also a regular open source contributor. And an active maintainer of Drogon, one of the fastest web application frameworks. Currently learning the internals of OpenBSD. I'm confident in the diversity of my skill set and my ability to understand then fix freestanding bugs that I find.

Work experience

Lumina Industries, Inc

Native Application Lead

01/2022 - CURRENT

Manages and leads our software team while also contributing to the codebase. Also handles deployment to customer environments.

Lumina Industries, Inc

C++/GPU developer

09/2021 - 01/2022

Design high performance architecture for our core product, integrating modern C++17/20 technology into our codebase. Introduces the team to modern tools like Sanitizers, FBinfer and cppcheck.

Research assistant

Department of CS (Prof. Chang), NSYSU

01/2016 - 08-2021

Leading the tech stack and does a variety of tasks. Including managing research server/cluster, optimize existing algorithms, apply AI to problems at hand. I also introduced the lab to tools like Address Sanitizer, C++14/17 as well as big data tools like ROOT. And moved all embedded development to Ubuntu/Arch Linux.

Open source

Some especially notable projects that I am involved in and did major contributions.

Drogon - drogonframework/drogon

C++14/17/20 web application framework

MAINTAINER

I am a maintainer of Drogon, one of the fastest web application frameworks. I contributed major subsystems for the framework. Such as C++20 coroutine, HaikuOS support, Gemini protocol integration and the DrogonTest async test framework. Now working on io_uring support for even higher throughput.

Etaler - etaler/Etaler

High performance HTM/tensor library

AUTHOR

Etaler is a high performance implementation of Hierarchical Temporal Memory, a biologically inspired AI model by Numenta. At time of release, Etaler is more than 20x faster than the community developed HTM.core on CPU and 40x faster on a GPU. I'm also a trusted member of the HTM community.

TLGS - marty1885/tlgs

Open source search engine for the Gemini protocol

AUTHOR

An open source search engine for contents that is served over the Gemini protocol. Written the state of the art C++20 and uses the SALSA ranking algorithm. It is now one of the 3 major search engines in Gemini space. It can also serve content over the Spartan protocol.