JUNHA YANG

CONTACT

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INTRODUCTION

I am a software developer who's quite experienced in leading a software project. I believe a sound system can be built even with restricted business resources if well-structured abstraction and principled design are followed.

EDUCATION

2016-current   Pohang University of Science and Technology

Bachelor of Computer Science and Engineering (GPA: 4.05/4.3)

INTERESTS

System Programming
concurrency · asynchrony · networks · WASM

Blockchain
consensus · inter-blockchain communication · light client · scalability

Cryptocurrency and Decentralization
DApp · DeFi · NFT · Web3

Computer Graphics
realtime rendering · global illumination · OpenGL

SKILLS

Languages	Rust, Modern C++, Python
Frameworks and Protocols	Tokio, OpenGL, Cosmos SDK, Amazon Web Services

WORK EXPERIENCES

2021-2022   **Hyperithm**   Infrastructure Team Head · Full-time

Hyperithm is a cryptocurrency trading firm. I contributed in building a trading Infrastructure.

- Was in charge of the entire infrastructure of the firm, including AWS and firm's various realtime products.
- Launched a new trading system which provides fast, abstracted and asynchrous data accesss to various crypto exchanges.
- Launched a new strategy operation platform which provides a trading strategy runtime and an instance management system.

| *2019-2021* | **Kodebox** | Core Engineer · Full-time |

Kodebox develops and maintains the CodeChain Foundry project, which is an open-source layer-1 blockchain solution based on Tendermint and Rust. I contributed in the overall development of the project.

- Developed a blockchain framework Codechain Foundry.
- Implemented Inter-Blockchain Communication (IBC) protocol modules for Codechain Foundry (article).
- Developed a Rust remote method invocation library called remote-trait-object.

| *2018* | **Netmarble** | AI Researcher · Intern |

Netmarble is a mobile game development and publishing company. I worked as an intern for the AI research center.

- Developed a system detecting abusers in MMORPG games, using an RNN trained with massive game logs.

PROJECTS

| *2022-current* | **PDAO** | Founder · Link |

A university-oriented DAO (Decenralized Autonomous Organization) for an education, research and alumni networking purpose. I am the founder of this organization.

- Operates a community for students and alumni.
- Provides seminars of various topics in blockchain.
- Currently works on DAO structure, tokenomics, and contract development for the offical launch on the Terra chain.

| *2019-current* | **fere** | Main developer · Link |

A realtime 3D rendering engine built on top of OpenGL, in Rust.

- Consists of a high-level abstracted layer defining a set of operations, and an engine that takes a stream of operations and renders it.
- Supports essential lighting and shading functionalities such as PBR, shadow, and etc.
- Supports irradiance volume as a global illumination method.
- Can record the framebuffer and encode to a video using ffmpeg.

| *2021* | **serde-tc** | Main developer · Link |

A Rust libary for trait method dispatch based on proc-macro.

- Inspired by remote-trait-object in the next section.
- Provides a proc-macro which generates a dispatcher and stub implementation from a trait definition.
- Provides a simple implementation of remote method invocation based on HTTP.
- Supports asynchronous methods.

| *2020-2021* | **remote-trait-object** | Main developer · Link |

A Rust libary for remote method invocation based on trait objects. It has been developed mainly by me, except minor revisions and code reviews. You can find an article about this project in the postings section.

- Abstracts services and proxy objects over traits.
- Provides a proc-macro which generates a dispatcher and stub implementation from a trait definition.
- Designed to easily export and import services.

- Based on Well abstracted and independent transport model.

2019-2021	**CodeChain Foundry**	Core developer · Link

A blockchain engine based on Tendermint and Rust, inspired by Cosmos SDK. You can find an article about this project in the postings section.

- Provides all the essential blockchain functionalities such as consensus, transaction, state DB, mempool, p2p-networking, and more.
- Based on a composable module system which provides sandboxing and principled inter-module communication.
- Supports IBC and light client.
- Supports GraphQL.

2019-2020	**junhasl**	Main developer · Link

A C++ library for serialization and deserialization that highly exploits template meta programming.

- Supports various primitive and composite types.
- Supports custom classes.

POSTINGS & TALKS

2022	*PDAO Seminar: An Introduction to Blockchains - 1*	Link
	PDAO Seminar: An Introduction to Blockchains - 2	Link
2020	*CodeChain Foundry*	Link
	remote-trait-object: One of CodeChain Foundry's core inter-module communication systems	Link
	CodeChain Foundry ICS Implementation	Link
	Blockchain Light Client	Link
	IBC and ICS	Link

OTHER INFORMATION

Experiences	2020 · Contibutor to the specification of the Cosmos IBC protocol Pull requests #392, #386, #384, #360
	2017 · President of Hanulim, an orchestra club in POSTECH
	2015 · National team for the International Science and Engineering Fair (ISEF)
Awards	2014 · Korean Olympiad in Informatics (KOI), Gold Award (2nd)
Languages	KOREAN · Mothertongue
	ENGLISH · Fluent
Personal Interests	Classical Music · Jazz · Rock · Pop · Movie

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