

# ZHU JUNHAO

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## OBJECTIVE

I am eager to pursue a Master's degree in Computer Science, with a specific focus on distributed systems, software engineering, and computer network. While machine learning is not my primary area of interest, I am open to conducting research that enhances the performance and usability of model training and inference.

## EDUCATION

Bachelor's Degree in Computer Science 2021,3 - Ongoing  
Yonsei University, South Korea GPA: 3.71/4.3, 94.9% (by the end of 7th semester)  
Total Scholarship Awarded 15,016,000 KRW  
Merit-based each year (Million Korean Won): 2021-3.07M, 2022-4.66M, 2023-5.44M, 2024-1.55M

## INTERESTED FIELD OF STUDY

Distributed Systems	Parallelism, Fault Tolerance, Synchronization, Cloud Computing, Block Chain Distributed FileSystem/Database/MachineLearning, Big Data, Container Orchestration
Computer Network	Software-Defined Network, Internet of Things, Network Protocols, Routing Algorithms
Software Engineering	Design Patterns, Quality Assurance, Maintenance, CI/CD, Formal Verification

## LANGUAGE SKILL

IELTS Listening/Speaking/Reading/Writing: 7.5/6.5/7.0/6.5 (overall 7.0)

## EXTRACURRICULAR KNOWLEDGE/SKILL

■ Familiar ■ Basic ■ Limited ■ Roughly understand

Distributed System	Map Reduce, Raft, Zookeeper, RPC, Transaction, Fork Consistency
Low Level Concurrency	Mutex/Read-Write/Spin lock, Conditional Variable, Atomics and Memory Ordering, SIMD (avx2)
Rust Ecosystem	Tokio, Rayon, Iced, Tonic (gRPC), Axum, Diesel, Clap, etc.
Java Ecosystem	Spring Boot, Spring Data JPA, Mybatis, Spring Security, Spring cloud Eureka, etc.
Cloud Native	Docker, Kubernetes
Cloud Operation	AWS CLI, Bash/Fish Script, Tmux, EC2, EKS, S3, Route53
Middlewares	Kafka, ZeroMQ, Nginx, Redis, Flink
Editing	LaTeX, NeoVim

## SIDE PROJECTS (clickable links colored in BLUE)

<a href="#">jhchat</a> (1 year ago)	An end-to-end encrypted chat server and client with customized protocol codec, logging, and key-exchange. Written before taking security course thus far from perfect.
<a href="#">jhplot</a> (1 year ago)	GUI wrapper for plotting coordinated graphs
<a href="#">jhremote</a> , <a href="#">jhscripts</a>	Bash/Fish scripts to automate tools like <a href="#">AWS CLI</a> , <a href="#">ffmpeg</a> , <a href="#">whisper</a> , <a href="#">latexmk</a> .
<a href="#">jhdns</a> , <a href="#">jhautomata</a>	Implementation of concepts from coursework
<a href="#">nvim</a> , <a href="#">jhconfig</a>	My personal configurations

## EXTRACURRICULAR STUDY

<a href="#">k8s-the-hard-way-aws</a>	Manually setting up etcd, containerd, kubernetes control plane, and worker nodes on AWS EC2 cluster with customized VPC
<a href="#">MIT 6.824</a>	Distributed systems open course series provided by MIT
<a href="#">KodeKloud</a> (ongoing)	A reputable online education platform famous for its CKA certificate courses I am following kubernetes and DevOps learning path
<a href="#">udemy</a> (ongoing)	I have subscribed to their Apache Flink course

## INTERNSHIPS

<a href="#">Yonsei ELC Lab</a>	Topic: Stream Processing Engines (continuation of 4-month Capstone Course)	2023/12/27 - 2024/3/6
Professor: Bernd Burgstaller ( <a href="#">ORCID</a> )	Supervisor: Dr. Shinhyung Yang ( <a href="#">ORCID</a> )	
<ul style="list-style-type: none"><li>consulted several papers to initiate an incomplete survey, namely <a href="#">Hazelcast Jet</a>, <a href="#">SABER</a>, <a href="#">BriskStream</a>, <a href="#">StreamBox</a>, <a href="#">Benchmarking Streaming Computation Engines</a>, <a href="#">Analyzing Efficient Stream Processing on Modern Hardware</a></li><li>contributed to a hybrid Java/C++ codebase for the paper <a href="#">Cloud Profiler</a> as well as another benchmark repository. In specific, I parallelized the data deserializer, visualized progress, adjusted operator fusion, wrote bash scripts for automation, migrated versions and addressed breaking changes, assisted my supervisor with debugging barrier server.</li></ul>		
<a href="#">Yonsei ELC Lab</a>	Topic: Block Chain	2024/9/TBD - TBD
Professor: Bernd Burgstaller ( <a href="#">ORCID</a> )	Supervisor: To be determined	