Jonghwan Park
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SUMMARY

Software engineering professional with 2+ years of experience in REST APIs, backend, and frontend development.
Machine learning researcher with 2+ years of experience in efficient distributed learning, generative modeling, and LLMs.
Maintained a service platform with 300,000+ daily active users and published 5 ML papers. (3 papers as the first author)

TECHNICAL SKILLS

- **Languages & Databases**: React, TypeScript, Node.js, Python, Java, Go, C++, SQL, GraphQL, PostgreSQL, MongoDB
- **ML & AI**: PyTorch, TensorFlow, JAX, Numpy, Pandas, Scikit-Learn, MLflow, RAG, LangChain, LlamaIndex, OpenAI
- **Cloud & DevOps**: AWS (S3, SES, Lambda, EC2), Docker, Kubernetes, Git, Maven, Oracle
- **Frameworks & Tools**: FastAPI, Flask, Spring Boot, WebRTC, WebTransport, Xcode, Android Studio

RELEVANT EXPERIENCE

Software Engineer
Winston Lab of Social Science and Innovation, Los Angeles, CA *Feb 2025 - Present*
Coursistant: AI agent for automating student queries (**React, Typescript, Tailwind, Spring Boot, mySQL, Flask, FastAPI**)
- Developed an AI chatbot and interactive dialogues to automate over 70% of student queries, cutting response time by 90%

Graduate Student Researcher
USC Mark & Mary Stevens Neuroimaging and Informatics Institute, Los Angeles, CA *Mar 2024 - Oct 2024*
USC Information Sciences Institue, Los Angeles, CA *Jun 2023 - May 2024*
Hanyang University Information and Intelligence Systems Laboratory, Seoul, Korea. *Feb 2021 - May 2022*
Machine learning research (**Python**, **PyTorch**, **Tensorflow, Scikit-learn, Numpy**, **Pandas**, **Linux**, **Bash**, **Huggingface**)
- Improved model accuracy by up to 30% in identifying clusters of neurodegenerative diseases by refining its cost function.
- Enhanced LLMs in a distributed computing environment with the SNIP pruning method, reducing inference time by 20%.
- Published 5 papers regarding distributed/federated online learning (improved communication costs by up to 99% on DNNs)

Full Stack Engineer
LG CNS, Inc., Seoul, Korea *Jan 2019 - Feb 2021*
Standardized development-based portal (**Spring Boot**, **Java**, **SQL**, **REST API**, **Javascript**)
- Built a Git-based starter kit with standard templates and reusable code, reducing setup time by 70% for 1,000+ developers.

LG U+ API integration with external companies (**Spring Boot**, **Java**, **SQL**, **REST API**, **Javascript**, **WebSocket**)
- Mobile data plan system integration with Netflix, Kia Motors, Thales, and Boltech (acquired 80,000+ clients).
  - Analyzed project requirements (50+), troubleshot issues, and managed developers as a development manager.
  - Developed APIs (80+) for clients to register, change, or cancel data plans; modeled data.

LG U+ large-scale mobile service system development & operation (**Java**, **SQL**, **REST API**, **Javascript**, **Microservice**)
- Maintained a mobile service system serving 300,000+ daily active users, identifying and troubleshooting real-time issues.

PROJECTS

Online marketplace (demo) (**Docker**, **React**, **Typescript**, **Go**, **GraphQL**, **FastAPI, Open AI, PostgreSQL**) *Jan 2025*

Books Review Diary (demo) (**AWS**, **Docker**, **Nodejs**, **Javascript**, **CSS**, **MongoDB**) *May 2024*

PUBLICATIONS

FedQOGD: Federated Quantized Online Gradient Descent with Distributed Time-Series Data
IEEE Wireless Communications and Networking Conference, Austin, TX, USA (published) *Apr 2022*

EDUCATION

University of Southern California, Los Angeles, CA *Dec 2024*
MS in Electrical & Computer Engineering - Machine Learning & Data Science (GPA: 4.0/4.0, MS Honors)

Hanyang University, Seoul, Korea *Dec 2018*
B.S., Electronic Engineering (GPA: 93/100, First prize for senior team project)