

Juyoung Park

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SUMMARY

Senior Software Engineer with 15+ years of experience in Android, Cloud, AI/ML, and Distributed Systems. Proven expertise in developing scalable mobile and cloud-based solutions, leading teams, and optimizing AI-driven services. Deep knowledge of Google Cloud, AI/ML deployment, and Android system architecture.

U.S. permanent resident authorized to work in the U.S. without sponsorship.

TECHNICAL SKILLS

- **Programming Languages:** Kotlin, Java, Python, C++
- **AI/ML:** TensorFlow, Scikit-learn, PyTorch, Keras
- **Big data Processing :** AWS (EC2, RDS, DynamoDB, S3, Lambda), Spark, Kubernetes, Docker
- **OS:** Android, Androidware, Linux, Tizen
- **Database:** NoSQL - Realm, Room, Neo4j, Amazon Dynamo DB
SQL - SQLite, AWS RDS, Oracle
- **Network:** EvDo, 3G, 4G, LTE, 5G
- **Etc:** Flutter, React.js, DevOps tools, various open-source projects about Android and Web, etc.

PROFESSIONAL EXPERIENCE

Principal Engineer & Mobile Service Team Lead | Samsung Electronics Co. | March 2022 - Present

- Developing connectivity and microxr for **AR glasses**
- Led software design and resource management for **Samsung place & location services**
- Designed and implemented a **large-scale big data distributed** processing and analysis system based on **AWS cloud**
- Maintained **service availability** above **99%** and achieved over **30%** reduction in **server costs** through effective optimization.
- Collaborated with AI/ML teams to enhance **real-time data processing and personalization algorithms**.

Senior Software Engineer & Technical Lead | Samsung Electronics Co. | Mar 2014 - Feb 2022

- Developed **Samsung Location-aware Context Services**, utilizing sensor fusion and ML-based tracking to improve geolocation accuracy **from planning to launch**.
- Architected and led the development of **gesture recognition** features for Samsung Wearable Devices on Android, enabling **intelligent motion-based interactions**.
- Designed and launched **Samsung Network Diagnostic Services** to analyze 5G/LTE network signals and enhance connectivity reliability, leading the project **from planning to release**.
- Designed and built **large-scale distributed data processing systems** using Cloud.

Software Engineer (Various Roles) | Samsung Electronics Co. | Dec 2005 - Feb 2014

- Contributed to the world's first LTE phone commercialization, implementing **FOTA (Firmware Over-the-Air)** updates.
- Designed and deployed **software updates and device management systems** for Android smartphones and feature phones.
- Developed **modem protocol NAS layers** for Samsung Galaxy devices, collaborating with Qualcomm, Exynos, and MediaTek teams.

KEY PROJECTS

- **Samsung Positioning & location Service** – Built cellular & sensor fusion location system leveraging big data processing.
- **Network Diagnostic Service** - analyzing 5G/LTE network signals and enhancing connectivity reliability.
- **AI-Powered Gesture Recognition for Samsung Watch** – Deployed ML-based motion detection and gesture control models for Wear OS.
- **5G Non-Standalone Mode NAS Layer Development** – Developed 5G NAS layers for Samsung mobile phones, improving network performance.

EDUCATION

University of Waterloo, Ontario, Canada

- Master of Engineering - Electrical and Computer Engineering | Artificial Intelligence & Machine Learning

Hongik University, Seoul, Korea

- Bachelor of Engineering - Computer Science

PUBLICATIONS & RESEARCH

- **"Adjusting the Latent Space of VAE for Fairness by Minimizing Free Energy" (2024)** – University of Waterloo, AI Fairness Research. Juyoung Park
- **"Enhancing Efficiency in Decentralized AI: A Dynamic Quantization Paradigm with Outlier Elimination" (2023)** – University of Waterloo, Deep Learning Research Project. Juyoung Park, Hanwen Ju, Sushil Pokhrel
- **"TinyML-Based Classification in ECG Monitoring System"** – Published in Computers, Materials, and Continua, 2023. Jaehyuk Kim; Yeungwoong Kyung; Juyoung Park

CERTIFICATIONS & AWARDS

- AWS Certified Solutions Architect - Associate (2020-2023)
- Best Programmer Award – Samsung Mobile Division (2021)
- Samsung Professional Programmer Certification (2021)
- Bold Challenge Award – Samsung Place Project (2019)