

## EXPERIENCE

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- **Samsung R&D Institute UK** Oxford, United Kingdom  
Software Engineer Oct. 2024 – Present
  - **Knowledge Graph and Reasoning:** Optimized and deployed a commercial graph database for 32-bit legacy systems by building Azure-based CI/CD pipelines for embedded environments (over 30% size reduction) and delivering modular C/C++ APIs using the Hourglass pattern for cross-platform compatibility.
- **Samsung Research, HQ** Seoul, South Korea  
Software Engineer Jul. 2020 – Sep. 2024
  - **Knowledge Representation and Reasoning:** Developed a module within the Personal Data Engine for Samsung Galaxy devices, implementing an embedded graph database and enabling inter-app communication to support on-device reasoning and personalized data services.
  - **Reinforcement Learning for Multi-Objective Constraints:** Researched and implemented multi-objective reinforcement learning algorithms to optimize decisions under conflicting objectives. Verified approximately 20% power savings in a base station PoC conducted with a leading U.S. telecom operator.
- **Republic of Korea Army Cyber Operations Command** Seoul, South Korea  
Sergeant, Software Engineer May 2018 – Jan. 2020
  - **Endpoint Security Client:** Built a Windows security client using C# and .NET 6.0, following the MVVM pattern; deployed across military networks. Optimized data transfer through delta encoding.

## EDUCATION

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- **Korea University** Seoul, South Korea  
Bachelor of Science in Computer Science Mar. 2013 – Jul. 2020  
Total GPA of 3.88 / 4.5 (93.8 / 100)

## RESEARCH

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- **Hongjun Jang**, Eunkyue Oh, Minsoo Kim, Taehun Kim, Yunhu Ji, “Method and Electronic Device for Providing Information Using Reinforcement Learning”, US Patent: US20240221018A1.
- Minsuk Choi, Kyungrae Kim, **Hongjun Jang**, Hyokyung Woo, Seowoo Jang, “Electronic Device and Operation Method for Deciding Cell On/Off Threshold Based on Traffic”, US Patent: US20230032030A1.
- Minsuk Choi, Kyungrae Kim, **Hongjun Jang**, Hyokyung Woo, Joan S. Pujol-Roig, Yue Wang, Hunje Yeon, Sunghyun Choi, Seowoo Jang, “Cell On/Off Parameter Optimization for Saving Energy via Reinforcement Learning”, IEEE Globecom Workshops (GC Wkshps), 2021.

## AWARDS AND HONORS

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- **Samsung Research S/W Award for Individual, 2024:** Review section
- **Samsung S/W Certificate: Expert Programmer, 2020**
- **International Collegiate Programming Contest, Ho Chi Minh City Regional 2017:** 3rd prize
- **International Collegiate Programming Contest, Daejeon Regional 2016:** 4th place (Minister of Science, ICT and Future Planning Award)
- **Samsung Collegiate Programming Cup, 2016:** 4th place
- **Samsung Software Track Scholarship, 2016 – 2017:** Full tuition (4 semesters)
- **Korea University Scholarship for Gifted Students in Science, 2013:** Full coverage of tuition and admission fees

## TEACHING

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- **International Olympiad in Informatics (IOI):** Student Assistant Coach for the Korean team (2016); Coach, IOI Training Camp in Korea (2013–2017).
- **Korea Olympiad in Informatics (KOI):** Coach and Problem Setter (2013–2017).