

## Hyunwook Kim

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### PROFESSIONAL EXPERIENCE

#### Hwashin America Corporation

June 2024–Present

##### IT Specialist

- Integrated OPC Server with LabVIEW and PLC systems to collect and visualize real-time manufacturing data, enhancing operational transparency and decision-making
- Designed and implemented SCADA and HMI systems for industrial automation, significantly improving process monitoring, control efficiency, and system responsiveness
- Monitored and reported manufacturing data quality using Oracle Database and LabVIEW, proactively identifying and resolving data accuracy issues to maintain high standards of data integrity
- Designed, configured, and managed a robust network infrastructure for 800+ users, including routers, switches, VPNs, firewalls, and IP-based CCTV systems, ensuring reliable connectivity and system security
- Developed and maintained web applications using C#, .NET, and ASP.NET Core MVC, delivering efficient and user-friendly solutions to meet diverse business requirements

#### Artificial Intelligence Institute of the University of South Carolina (AIISC)

Jan. 2023–May 2024

##### Research Collaborator

##### **“Explainable Neuro-Symbolic Model for Ingredient Substitutions”**

- Organized datasets comprising over 30,000 ingredient-substitute pairs in JSON format, alongside comprehensive nutritional data, advancing food computing research.
- Developed a user-centric recommendation algorithm utilizing an ingredient-substitute knowledge graph. This implementation optimized the ingredient-substitute pair retrieval speed by 10%, enhancing both data accessibility and the efficiency of the recommendation algorithm.

#### Republic of Korea Marine Corps, Pohang, Republic of Korea

Mar. 2011–Dec. 2012

##### Staff Sergeant

- Managed a database for a fleet of 100+ military vehicles, optimizing maintenance schedules and reducing accident risks by 10% and major breakdown incidents by 25%.
- Recognized with the Best Marine Award in 2011 for outstanding dedication and performance.

### SKILLS

LabVIEW, OPC Server (NI OPC, KEPServerEX), TCP/IP Ethernet Protocol, AB PLC (Studio 5000, FactoryTalk ME/SE), Mitsubishi PLC (GX Works2, GX Works3), LS PLC (XG5000, XP Builder), AWS (Certified Cloud Practitioner), VPN, Firewalls, IP-based CCTV, Routers, Switches, Oracle Database, MariaDB, C++, Python

### CERTIFICATE

**GX Works 3 Programming** – Mitsubishi University at Allied Automation, Inc.

Mar. 2025

**PLC Basics GX Works 2** – Mitsubishi University at Rhodes State College

Feb. 2025

**AWS Certified Cloud Practitioner Certification** – Amazon Web Services

Aug. 2023

### EDUCATION

**University of South Carolina (GPA: 3.94 / 4.00)** MS in Computer Science

Jan. 2023–May 2024

**University of South Carolina (GPA: 4.00 / 4.00)** Ph.D. in English

Aug. 2019–May 2024

**Chonnam National University** BA and MA in English

Mar. 2014–Aug. 2019