

# 조락현 | Rakhyeon Jo

⚡ Embedded System Engineer | 9 Years Experience | HW/FW Full-Stack

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## 💼 핵심 역량 | Core Competencies

- ✓ 9년간 STM32 기반 임베디드 시스템 Full-Stack 개발 전문 (회로 설계 → 펌웨어 → 양산)
- ✓ 8+ 분석 장비 메인보드 설계 및 양산 완료
- ✓ HW/FW 통합 개발로 디버깅 효율 40% 향상
- ✓ FreeRTOS, PID Control, Ethernet 통신 전문
- ✓ 자동화 테스트 JIG 개발로 검사 시간 60% 단축
- ✓ 특히 발명 2건 출원 (가스 제어, 광학 분석)

## 🏢 Work Experience

### ATIK Co., Ltd.

#### Senior R&D Engineer

📅 Aug 2020 ~ Present (5y 5m) | R&D Center / Main Board HW/FW Design

- Psi-1000/3000: Precision Gas Pressure Control System
- L-LPC: Laser Particle Analyzer
- MS: Mass Spectrometer DRV Board
- JIG System: Automated Board Test Equipment
- L-Titrator: Titration Concentration Analyzer
- Nu-2000: UV+IR Optical Concentration Analyzer
- GasQuantrol: Gas Control Equipment
- Sigma/Epsilon/SSC Series

### Chemtronics Co., Ltd.

#### Junior R&D Engineer

📅 Aug 2019 ~ Aug 2020 (1y) | Consumer Electronics Team / Touch Module

- LG Induction/Oven Touch PBA Mass Production
- Samsung Air Conditioner Touch PBA Mass Production
- Winix Air Purifier Touch PBA
- Haatz Hood Proximity Sensor Touch PBA

### Dreamtech Co., Ltd.

#### Junior R&D Engineer

📅 Nov 2016 ~ May 2019 (2y 7m) | Advanced R&D Lab / Fingerprint Module

- Hyundai Motor Fingerprint Recognition PBA (Mass Production)
- Mobile Ultrasonic Fingerprint Recognition PBA
- FPC Fingerprint Recognition PBA ODM
- 3D MID Automotive Module (Government Project)

## 🔧 Technical Skills

### ⚡ Circuit Design

- STM32F4/F7 Main Board Design
- Switching/Linear Regulator Power Supply
- 16-bit ADC + OP-Amp/TIA Sensor Circuit
- 16-bit DAC External Interface
- Photocoupler Isolation Circuit
- PCB Artwork (PADS, Altium Designer)

### 💻 Firmware Design

- STM32 Firmware Development (C)
- FreeRTOS Task Management
- PID Control Algorithm
- Y-modem IAP Bootloader
- Ethernet TCP/UDP Communication
- UART/SPI/I2C Protocol
- Touch LCD UI/UX Design

### 💻 Tools & Software

- Circuit: OrCAD, PADS, Altium Designer
- Firmware: STM32 IDE, VS Code
- Software: C, Python
- Version Control: Git, Tortoise SVN

## 🎓 Education & Certifications

### 🎓 Education

- Myongji University (2011~2017)
- Bachelor of Science in Electronics Engineering

### 🏆 Awards & Activities

- Hanium ICT Contest - Korea IT Industry Association (2016.09~2016.12)

### 📜 Certifications

- Computer Specialist Level 3
- ITQ: HWP(B) / Access(B) / Excel(B) / PowerPoint(A)
- TOEIC Speaking: 110 (Intermediate Mid 1)
- Excavator Operator License (2012.11)