

RESUME

Saravanakumar Kunasekaran,
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Professional Summary

Experienced Application Developer with 3+ years of expertise in POS (Point of Sale) machine software development and embedded systems. Proficient in C programming, hardware-software integration, and secure communication protocols. Skilled in optimizing transaction processing and ensuring system reliability.

Experience Summary

- **Software Engineer (2.8 years):** Developed POS applications (Display, Wi-Fi, Ethernet, Printer, VP100 PIN entry), integrated ISO 8583, and used TCP, WebSocket, MQTT for real-time communication. Optimized transactions with SQL databases.
 - **Embedded Programmer/Technician (1 year):** Designed and tested firmware for embedded systems, debugged hardware with oscilloscopes, and created system diagrams.
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Technical Skills

- **Programming Languages:** Embedded C language
 - **Software Development:** Multithreading, Socket Programming (IPC Communications)
 - **Tools & Frameworks:** Eclipse, NetBeans, GCC, GDB, Visual Studio Code.
 - **Database:** SQLite, MySQL.
 - **Protocols:** ISO 8583, EMV, NFC, RS232, MQTT, TCP,WebSocket,CURL,UART,SPI, CAN.
 - **Version Control:** Git
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EMPLOYMENT HISTROY:

Relevant Experience: 3.8 Years

Total Years of Experience: Above 6 Years.

- **Software Engineer at Valorpaytech**, Chennai (March 2022 – Present): Worked with Wi-Fi, Ethernet, Display, Printer, and SQLite DB.
- **Electrical Design Engineer at UB Designs**, Pudukkottai (March 2020 – March 2022): Commissioned Wi-Fi enabled gang switches/electrical panels with home automation in apartment buildings.
- **Commissioning Engineer at Riyas Asharaf Technical Services LLC**, Dubai (June 2016 – Jan 2018): Commissioned VFD electrical panels and Wi-Fi gang switches.
- **Member Technical Staff at Jei Balaji Electrical Associate**, Erode (Dec 2014 – Dec 2015): Developed CAN test stub using PIC18F4580/Arduino for high-end electrical panel testing.

Professional Experience:

Application Developer

Valor Paytech Chennai.

From March 2022:

Project 1	Valor Connect
Description	This project is primarily designed to connect a Linux-based POS machine with billing software, enabling wireless communication via the MQTT protocol. It also facilitates sending heartbeats using CURL. The system integrates with the Valorpay technology portal for seamless transaction processing and monitoring.
Role	Software Developer
Language	C.
Operating System	Linux.

- **Developed application software for Linux** using the C programming language to support various functionalities.
- **Integrated Point-Of-Sale (POS) devices** with a web portal to enable seamless transactions and communication.
- **Created a C application** to receive raw JSON MQTT messages from the POS system, which is Parsed by library function includes initiating sales and sending Response to MQTT.
- **Developed a display module** to show product names and amounts on the POS interface, providing real-time transaction details.

Project 2	PCPOS Integration
Description	This project is primarily designed to connect a Linux-based POS machine with billing software, supporting wireless communication over the TCP protocol within the same network. The Postman software tool was used for testing and API interaction during development.
Role	Software Engineer
Language	C.
Operating System	Linux.

- **Developed application software for Linux** using the C programming language.
- **Integrated Point-Of-Sale (POS) devices with a web portal** using socket programming for efficient communication.
- **Developed a C application** to receive raw JSON messages over the TCP protocol using socket programming between the POS system and the portal, enabling seamless sales initiation within the same network.
- **Implemented multi-port connections** in the project to handle multiple communication channels simultaneously for improved scalability and performance.

Project 3	VP100
Description	The VP300 - PINPAD project focuses on establishing a connection between a Linux POS machine and the PINPAD, which interfaces with the POS system via RS232 (RJ11). This ensures seamless communication between the devices for secure transaction processing.
Role	Software Engineer
Language	C.
Operating System	Linux.

- **Project Overview:** The **VP300 - PINPAD** project establishes a connection between a Linux POS machine and the PINPAD device.
- **Communication Protocols:** The connection is made via RS232 (RJ11) or USB cable, depending on the system configuration.
- **Data Format:** The communication between the POS machine and the PINPAD is carried out using hexadecimal values, ensuring efficient and secure data exchange.
- **Functionality:** This setup facilitates seamless communication for secure and reliable transaction processing between the POS system and the PINPAD.

Education

- Bachelor of Engineering – (Discipline: EEE [20011-2014]) from Mount Zion College of Engineering and Technology (Anna University).
 - Diploma of Engineering – (Discipline: EEE [2008-2011]) from Alagappa Polytechnic College (Department of Technical Education).
 - Senior Secondary Education - “82%” [2007-2008] from D.K.G Higher Secondary School.
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Certifications

Completed a one-year professional training course in Embedded Systems, gaining hands-on experience in designing and developing embedded solutions at EMERTXE Embedded solutions Bangalore.

Personal Details:

- Date of Birth: 19/07/1993,
- Age: 30,
- Gender: Male,
- Marital Status: Single,
- Fathers Name: M.KunaSekaran,
- Languages Known: Tamil, English,
- Nationality: Indian.

I hereby declare that the above information is correct and true to the best of my knowledge and belief.

Place:

Yours Faithfully

Date:

Saravanakumar.K