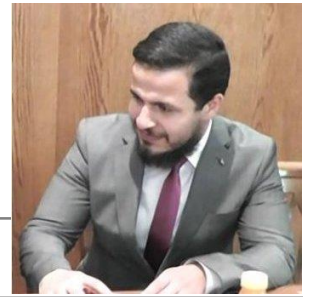


# MAHMOUD A. SWEDAN

Phone: (+20-111) 000-9089 | Email: [swedan2003@gmail.com](mailto:swedan2003@gmail.com)

[in https://eg.linkedin.com/in/mahmoudaswedan](https://eg.linkedin.com/in/mahmoudaswedan)

Address: 10 Hasan Al-Mamoon Street, Six District • Nasr City, Cairo, Egypt, P.O: 11787



**Objective** Embedded Software Engineering Position

## HIGHLIGHTS OF QUALIFICATIONS

- More than 8 years of software engineering experience, with strong analytical skills
- Specialist in the development of firmware for **Automotive, Payment and Communication** fields
- An effective leader, skilled in enlisting the support of team members in aligning with project and organizational goals

## KEY COMPETENCE

- Created Automotive Software for high profile clients like **BMW, VW, PSA, FORD and Renault**
- Created Payment Software for Multinational/National banks
- Worked with **Qualcomm** to develop Communication software based on DMSS (CDMA 2000).
- Experienced with wide variety of Micro-controllers, Compilers and Debuggers (**Vxworks, OSEK, UCOS||, OSEK and REX**), (**ARM, AVR, MIPS, Freescale S12XD, NEC V850FF3**), (**CodeSourcery, ADS 1.2, GCC, ...**)
- Experienced in Model-Driven Development using IBM Rational StateMate®
- Experienced in Payment Industry: Bank messaging specs(**ISO-8583**), Global Card Schemes (**VISA, MasterCard**), PCI compliance, card security and Transaction security/EMV, Chip&Pin technologies (**EMV L2**) & Contactless, **ADVT/ M-TIP** - Type Approval testing
- Experienced in Requirement engineering and Elicitation Techniques.
- Supervise Validation, integration, Unit Testing and static code analysis.
- Good practitioner of **CMMI** Model and creating documentation for different process areas

## EXPERIENCE

### **BITEL EMEA (PAYMENT INDUSTRY)**

*Strategic Projects Technical Lead*

Cairo, Egypt  
Aug 13 – Present

- Successfully re-designed and developed a more robust and highly maintainable Payment software.
- Successfully completed all software design, development and integration assignments "on time".
- Interfaced with customers to resolve problems in the field.
- Involved in the Pre-sales engagement of the solution. Include producing demo, Proof of Concept (PoC) and supporting Request for Proposals (RFPs).
- Conducted Estimations of the development components required for the entire solution.

# MAHMOUD A. SWEDAN

Phone: (+20-111) 000-9089 | Email: [swedan2003@gmail.com](mailto:swedan2003@gmail.com)

- Provide technical review of the solution for Solution Review Panels (SRPs)
- Responsible for the technical governance for projects
- Conducting code reviews for the development team

## SMART CARDS APPLICATIONS COMPANY

*Embedded Software Team Leader*

Cairo, Egypt  
April 11 - Aug 13

Contribute to E-Gov Apps that automate the management and disbursement of subsidized food items through a network equipped with an EFT POS, allowing customers with application on their smart cards to receive government-subsidized food items in a convenient and efficient manner

- Personalize Smart Cards and create Different Applications on it
- Communicate with hardware security module (HSM) that safeguards and manages digital keys for strong authentication
- Communicate with Secure Access Module to enhance the security in devices to perform secure transactions and make secure authentication against smart cards.
- Develop and supervise the development of EFT POS Software Applications on ARM Processor and Communicate with Backend through Bank messaging specs(ISO-8583) .

## VALEO

*Principal Embedded Software Engineer*

Cairo, Egypt  
May 08 - Feb 10

- Involved in complete project life cycle having completed 4 Automotive projects for **VW, PSA, FORD and BMW** successfully
- Implemented many software modules between driver, and application layers for Freescale S12XD , NEC V850FF3.
- Developed low level device drivers for Valeo Switches and Control
- Developed code using Model based software tool IBM Rational StateMate
- Authored multiple development artifacts: requirements, detailed design, code, unit and target test cases
- Wrote test cases and performed unit and system testing

## QUICKTEL

*Senior Embedded Software Engineer*

Cairo, Egypt  
April 06 - May 08

Designing and implementing Software for CDMA Phones & Terminal based on CDMA Technology from CDMA module which are based on ARM7

- Implementation of Flash Memory Driver with Reusable Interface to ease the insertion of new types of Flash memories
- Use the Observer design pattern to let the UI (Lcd UI and serial port) be notified when there is a call processing happen (Call Incoming, lost, new call established, etc...)
- Make conditional compilation to ease porting of the changes to different RF Chipsets

# MAHMOUD A. SWEDAN

Phone: (+20-111) 000-9089 | Email: [swedan2003@gmail.com](mailto:swedan2003@gmail.com)

- Let the Phone to auto detect The UIM Card to play in UIM mode or NON UIM mode & take the network parameters from the Flash instead of UIM
- Add the PIN Management functionality (PIN and PUK code LOCK, UNLOCK)
- Make a realistic phone battery charging state machine to be adapted with HW Platform
- Contribute in The SMS Protocol Stack to solve some problems arise due to the countries requirements
- Add support for Dot matrix LCD
- Adjust QCom Codecs to use them for different Sound Sources

## ZAMZAM MECHANICAL AUTOMATION *Embedded Software Engineer*

Cairo, Egypt  
2004 - 2006

- Conceptualized, designed and developed a motor-speed controller interfaced by a customized GUI programmed in VC++
- Developed firmware in C and assembly for an embedded high frequency quadrature decoder using an 8-bit MCU
- Implemented a motor speed PID control feedback loop on an 8-bit MCU using PWM
- Engineered PC-MCU data messaging system using the SPI communication protocol
- Designed electronic circuit for motor controller to interface MCU

## EDUCATION

## AIN SHAMS UNIVERSITY, FACULTY OF ENGINEERING *Bachelor of Science in Computer Engineering*

Cairo, Egypt

## SKILLS

<b>Languages</b>	C/C++, Java, Python, Perl, UML, HTML, XML	
<b>RTOS</b>	Vxworks, OSEK, UCOS  , REX and Linux	
<b>Processors</b>	ARM, MIPS, AVR, Freescale S12XD, NEC V850FF3.	
<b>APIs\Tools</b>	<ul style="list-style-type: none"><li>• IBM Rationale (StateMate, Rhapsody, Test Real Time (RTRT))</li><li>• CodeSourcery for ARM</li><li>• ADS1.2, IAR, KEIL</li></ul>	<ul style="list-style-type: none"><li>• Mathworks Polyspace</li><li>• Visual paradigm, ArgoUML.</li><li>• Source Insight, SlickEdit, Code Worrier and eclipse</li></ul>
<b>Networking</b>	TCP/IP, RPC, HTTP, Soap, Jason	
<b>Wireless Com</b>	GPRS, RFID, NFC, WiFi, Bluetooth	
<b>Cryptography</b>	RSA, DES, 3DES, AES, SSL\TLS	
<b>Config. Mgmt.</b>	PVCS, CVS, GIT, SVN	