IN SUMMARY

As a highly active and motivated professional software architect with more than of 10 years of experience in analysis, design, development and architecting large scale, national and international enterprise systems, my skills are not limited to a specific development platform and my solutions include a variety of technologies based on C/C++, Java, Python, etc. As an architect of national enterprise projects, I've always faced strict and risky conditions in which security, performance, data consistency, data correctness, distribution of resources, fault tolerance, high availability, authorization and authentication have always been important factors. Recently, because of my interest in Data Science and Machine Learning concepts, I have accepted to be a Deep Learning research developer to explore this field and give possible consultant for development of software in this area.

EMPLOYMENT EXPERIENCES

July 2016 - Present
Sahab Pardaz Co.
Deep Learning Research Developer
Senior Software Architect
Project Manager
- *Development Environment*: Debian based Linux distributions, Git, Redmine Issue Tracker, Test Driven Development, Free IDE, Agile based methodology, *gcc*, *g++* and *OpenJDK 7* compilers, *C++11* for back-end services, etc.

- *As a Deep Learning Research Developer*: Cooperation with researchers and other developers on design of deep models in order to overcome a specific problem; Development of designed Machine Learning and Deep models in various programming languages like C, C++ and Python; Gathering, preparation and refining train data and feeding to the model; Evaluation and updating model according to new train data; Measurement of different factors of a learning model like error rate in order to study model behavior; Working with various frameworks like TensorFlow, Torch, Theano, OpenCV, etc; Doing GPU and CPU computation using CUDA, Theano, TensorFlow, etc

- *As a Senior Software Architect*: Studying various aspects of a software in order to detect and design core interfaces, business boundaries, contracts and constraints in each subsystem; Use of state-of-the-art architectural patterns and technologies in order to have a modern and working software, Meeting with other architects in order to share knowledge and understandings about a problem and give solutions; Guiding senior developers in order to have a clean and planned implementation

- *As a Project Manager*: Arranging different teams for a project like architects, developers, analysts, designers, testers, etc; Conducting sessions with stack holders and product managers in order to have a better understandings about the software; Giving time schedules to supervisors; Assigning tasks to different teams; Monitoring and organizing activities from various teams to keep the progress up and running

October 2016 - Present
AdTube Co.
Chief Technical Officer
Senior Software Architect
- *Development Environment*: Windows Server, Git, Test Driven Development, Visual Studio IDE, Scrum methodology, Mostly C#.NET for back-end services, Angular JS for front-end.

- *As a Chief Technical Officer*: Making decisions about the technological future; Holding sessions with stack holders in order to define and extract corporation stream lines; Supervising developers, architects and other crews in order to have a steady and live stream line

- *As a Senior Software Architect*: Design and implementation of core interfaces in advertising products, Defining tools and technologies and give consultant about the future issues; Guiding developers through the process of development and making them avoid possible mistakes; Having a continuous supervision on development progress and giving back proper reports to managers

June 2016 - Present
Adro Co.
Senior Software Architect
Senior C++ Developer
- *Projects*: Real Time Bidding (RTB) Engine serving millions of requests from Supply Side Platforms (SSP) and other RTB Engines.

- *Development Environment*: Ubuntu Server, *g++*, *gdb*, *valgrind* memory profiler, *CMake*, *git*, *TFS*, etc.

- *As a Senior Software Architect*: Providing design and architecture of the RTB engine serving more than 200 million requests (advertisement impressions) per day; Introducing scalability and HA featuress to an existing RTB engine; Conducting architectural sessions in order to provide a fine solution to sudden issues; Guidance through the selection of development and build tools; Providing safe solutions to transactional and financial operations.

- *Technologies*: Asynchronous IO and IO event driven development using *libev* and *libuv* libraries; HAProxy; Linux Virtual Server (LVS); Real Time Kernel; OpenRTB Specification; Multithreading; Redis; Deep Packet Injection; Nginx load balancing; Gatling; *libeio*; *libcares* for Asynchronous DNS Resolving; *systemd* and *journald* services; *libnuma* for Non-Uniform Memory Access; *TCMalloc* for thread wise buffer caching

April 2015 - October 2016
Noavaran Tejarat Gostar Naeem Co.
Chief Technical Officer
Senior Software Architect
Senior C/C++/Java SE Developer

- *Development Environment*: Ubuntu Desktop; Ubuntu Server; *git*; Jenkins; Redmine Issue Tracker; Test Driven Development; Free IDE; Agile based methodology; *gcc*, *g++* and *OpenJDK 7* compilers; *C++11* for back-end services; Python 2 and 3; etc.

- *As a Chief Technical Officer*: Managing and coaching more than 15 software and hardware developers organized in 6 different teams; Strategic decision making for company's technical future; Cooperation with and coaching research teams operating in *Image Processing, Machine Learning, NLP, Security, Hardware, Cryptography, Mathematics* fields; Supervising all data structures and algorithms proposed by research team and coaching developers and architects through implementation phase; Conducting sessions with academic people and using the top most national knowledge to supply the research teams

- *As a Senior Software Architect*: Service Oriented Architecture; Micro Service Architecture; C/C++ based Architecture; Java SE/EE based Architecture; Distributed Architecture; Clouding strategies like SaaS, IaaS, PaaS; High performance message queues; Micro-batching and stream processing; Durable queues; Supervising testers and designed test scenarios; etc

- *Technologies*: PKI; Design of CA Infrastructure; ICAO CSCA and DS Arhcitecture; NFC tags and chips; NFC readers and writers; ICAO Documents 9303; Biometric algorithms and engines; Architecting ABIS; Distributed processing and data storage like Hadoop, XtreemFS, Gluster, etc; Architecting Network Analysis engines; Huge data structures; In memory data structures; Query languages using Yacc and Lex; Apache Hadoop Family; Apache Cassandra; Redis; Apache ZooKeeper; MemCached; Bloom Filters; Apache Kafka; Apache Storm; Apache Spark; Apache Ignite; Relational PostgreSQL; Object Oriented PostgreSQL; PL/PgSQL; Hottentot RPC Framework; PKCS12; PKCS11 API; PKCS10; PKCS7; etc

- *Hardware*: Security Tokens and Cryptographic Chips; NFC reader and writer devcies; Embedded Programming; Raspberry Pi 2; Arduino Boards; ARM MCUs; etc

- *Projects*: Kawthar Geographically Distributed ePassport Issuance System; NETWE Network Analysis Engine; Distributed Crawler Engine; Consular Portal for Iran's Ministry of Foreign Affairs; ABIS Engine; Biometric Data Enrolment Applications; Query language for NETWE using Yacc/Lex

February 2015 - June 2015
Sahab Pardaz Co.
Software Architect
Distributed Systems Architect
Senior Java SE/EE Developer
C++ Developer

- *Development Environment*: Ubuntu Desktop; Ubuntu Server; *git* and Mercurial; Jenkins; Gerrit; Redmine Issue Tracker; Test Driven Development; Free IDE; Scrum methodology; *gcc*, *g++* and *OpenJDK 7* compilers; etc.

- *As a Software Architect*: Focusing on scalable systems with high throughputs and balancing the load among many nodes; Participation in architecting sessions; Supervising C/C++ and Java developers; Designing tests and test scenarios; Maven-based versioning system for writing embedded stubs for facilitate test scenarios

- *Technologies*: Apache Hadoop Family; Bloom Filters; Apache ZooKeeper; Apache Cassandra; Redis; MemCached; Apache Kafka; Apache Storm; Apache Spark; Apache Ignite; RPC solutions like GRPC (Google RPC); ZeroIce; etc

March 2013 - June 2015
Mojtama E Fanni Tehran (Tehran Technical Complex)
Director of Programming Department
C++/Java SE/EE Instructor
Senior Java EE Developer/Architect
- *Development environment*: Ubuntu Server, Git, Free IDE, Agile based methodology, *gcc, g++ and OpenJDK 6* compilers, etc.
- *As a director of department*: Managing and supervising classes, Coaching instructors, Designing courses and their syllabus, etc
- *As an architect/developer*: Developing a service oriented educational system called EduSys, Developing automation and financial systems
- *Technologies*: Java based development, Web tier using Spring MVC and Spring Security frameworks, PostgreSQL database

December 2011 - June 2013
Sharif CERT Center
Java SE/EE Developer
C/C++ Developer/Architect
- *Development environment*: Ubuntu Desktop, Ubuntu Server, SVN, Git, Eclipse IDE, Agile based methodology, *gcc, g++ and OpenJDK 6* compilers, Test Driven Development, etc.
- *As an developer/architect*: Research and develop on Network Security concerns (L2 and L3), Working with algorithms and data structures which they are involved in security related topics, Malware analysis, Traffic analysis, Attack analysis
- *Technologies*: C/C++, Java 6, PostgreSQL, MySQL, JNetPcap, tcpdump, tcpreplay, etc
- 2012 May, Member of Technical Team, CTF Competitions, Iran's Second National Hacking Contest, Sharif University of Technology. Designer and Auditor for Java Secure Coding Question
- 2013 Feb, Member of Technical Team, CTF Competitions, Iran's Second National Hacking Contest, Sharif University of Technology. Designer and Auditor for C++ Secure Coding Question

October 2011 - June 2012
Sharif Engineering Process Development Co.
C++/Qt Developer
- *SEPDCo Gas Network Simulator System*: A gas network and pipeline designer and simulator application, C++ using Qt framework, Qt View Framework classes like *QWidget, QMainWindow, QGraphicsScene, QGraphicsView*

September 2009 - August 2011
Septa Co.
C#.NET Developer/Architect
- *Development environment*: Windows 7, Windows 2008 R2, TFS, Source Safe, Microsoft Visual Studio 2008-2010, Agile based methodology, etc
- *Projects*: *SeptaNSF; A .NET based Framework, www.1st.ir B2B Portal, PayamGostar Application, Septa Update Center, Septa Automation System*
- *Technologies*: WCF, .NET Framework 3.5, Binary Obfuscation and Protection softwares, SQL Server 2008

2009 June-2009 September
Shabakeh Pardaz Rayaneh Co.
C++ Developer/Architect, C#.NET Developer
- *Projects*: Isfahan Province Electricity Dispatch Center, 121 Call Center, Recording and Archiving System for Isfahan Central Jails Organization

2008 March -2009 June
Aramin IT Co.
C++ Developer/Architect, C#.NET Developer
- *Projects*: Isfahan Province Electricity Dispatch Center, 121 Call Center

EDUCATION

- 2004-2008
  University of Isfahan
  Isfahan, Iran
  Bachelor of Software Engineering

SCIENTIFIC AND PROFESSIONAL SKILLS

- *Computer Science*: Data Structures, Algorithm Design, Automata Theory, Turing Machine and Computation Theory, Linear and Abstract Algebra, Information Theory, Cryptography, Quantum Cryptography and Key Distribution, Quantum Computation, Public Key Infrastructure, Artificial Intelligence and Machine Learning, Relational Databases, Graph Databases, Key-Value Databases, File Systems, Operating Systems, Kernel Architecture, Logical Circuits, Digital Circuits, Analogue Circuits, etc

- *Data Science*: Reinforcement Learning, Classification and Clustering techniques, Deep Learning, Neural Networks, CNNs, RNNs,Training Models, Learning Theory, etc

- *Programming Languages*: C, Embedded C (ARM, AVR), C++, Java, Python

- *Databases*: PostgreSQL (Relational and OO), Oracle RDBMS, MySQL, MongoDB, Apache Cassandra, Neo4j, Redis, etc

- *Operating Systems*: Linux Distros (Ubuntu, Debian, CentOS), FreeBSD

- *Source Version Controls*: Git, SVN, Mercurial

- *Software Engineering and Project Management*: MVP, Agile methodologies (Scrum), RUP, etc

- *Frameworks*: C++ (STL, Boost), Java (Spring Family, Hibernate, Hadoop Family, Mockito, JUnit, etc)

INTERESTED IN

- *Mathematics*: Linear and Abstract Algebra, Probability Theory, Information Theory

- *Philosophy*: Western Philosophy, Socilogy, Economics, Politics and Humanities

- *Physics*: Quantum Physics, Quantum Mechanics, Particle Physics, Relativity, Theory of Everything, Photonics

- *Cryptography*: Information Security, Network Security, Security Algorithms, Quantum Information Theory, Quantum Key Distribution, Quantum Cryptography

- *Telecommunications*: Modulation, Multiplexing, Codes, Telecommunication circuits, Photonics and optical fibers, IEEE 802.3 Protocols, Information Theory, Coding Theory, Computer Networks, etc

- *Music and Musicology*: Classic, Rock, Metal, etc