IN SUMMARY

As a highly motivated and professional software developer and architect with more than of 10 years of experience in analysis, design, development and building large scale, national, governmental and international enterprise systems, my skills are not limited to a specific development platform and my architectural solutions include a variety of technologies, patterns and concepts based on C/C++, Java, Python, etc. As an architect of governmental enterprise software, 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, etc have always been important factors. Recently, because of my old academic interest in Data Science and Machine Learning, I have accepted to be a Deep Learning research developer and author for Manning Publication to explore this field and give possible consultant for algorithm and software development.

EMPLOYMENT EXPERIENCES

Jeppesen, a Boeing company

Sweden, Gothenburg
February 2017 - Present
Senior C++/Python Engineer (As a consultant)

- *Development Environment*: Redhat based Linux distribution, Mercurial, Test Driven Development, Scrum, C++, Python, Jenkins, C#.NET for UI development
- *As Senior C++/Python Engineer*: Mainly working on Manpower Planning product, back end and core libraries which they are C++ and Python. Sometimes some modifications is needed on the UI side which is in C#.NET.

Telescope Services AB.

Sweden, Lund
January 2017 - Present
Senior Software Engineer/Architect

- *W*orking as Software Engineer and Software Architect consultant. My first cooperation experience with Telescope has been Jeppesen.

Sahab Pardaz Co.

Iran, Tehran
July 2016 - February 2017
Deep Learning Research Developer, Enterprise 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 8* 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 an Enterprise 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 and managers 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; Preparing time schedules for supervisors; Assigning tasks to different teams; Monitoring and organizing activities from various teams to keep the progress up and running

Adro Co.

Iran, Tehran
June 2016 - February 2017
Senior Software Architect, Senior C++ Engineer

- *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

Noavaran Tejarat Gostar Naeem Co.

Iran, Tehran
April 2015 - October 2016
Chief Technical Officer, Senior Software Architect, Senior C/C++ 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

Sahab Pardaz Co.

Iran, Tehran
February 2015 - June 2015
Distributed Systems Architect, Senior Java SE/EE Engineer, C++ Engineer

- *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

Mojtama E Fanni Tehran (Tehran Technical Complex)

Iran, Tehran
March 2013 - June 2015
Director of Programming Department, C++/Java SE/EE Instructor, Senior Java EE Engineer/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

Sharif CERT Center

Iran, Tehran
December 2011 - June 2013
Java SE/EE Engineer
C/C++ Engineer/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

Sharif Engineering Process Development Co.

Iran, Tehran
October 2011 - June 2012
C++ Engineer, 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*

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, Extreme Metal, Alternative Metal, Progressive Metal, Alternative Rock, etc