



Pouyan Heyratpour
Software Engineer




Iran | Software Development
1991 Nov. 5th

in /pouyanh

 /pouyanh

 <https://pouyan.dev>

 me@pouyan.dev

   +98 933 947 9721

Me in a nutshell

I'm Pouyan, a passionate problem-solver who thrives on pattern recognition and automation. My expertise lies in software development, electronics, and embedded systems. I excel at breaking down complex systems into manageable layers and creating abstractions to streamline processes. I believe that a strong foundation in business modeling is essential for robust software development, preventing anemic domain models. My motivation stems from tackling complex challenges, whether technical or business-related, and actively seeking feedback to continually improve.

What did I tell

My Blog: <https://pouyan.dev/blog>

What can I do

Software Architect:

- **Domain-driven design (DDD):** Categorize problem space into separate domains, provide minimal suitable model for each domain, design solutions to fulfill each model necessities individually. Join bounded contexts by designing a connection backbone e.g. event broadcasting or requests over messaging infrastructure.
- **Hexagonal Architecture:** Introduce abstract behaviors (ports) and make inner layers dependent to it, realize them as adapters in outer layers.
- **Command Query Responsibility Segregation (CQRS):** Separate command actions from queries by defining different API paths, data transfer objects (dto), process loops and sometimes databases used for each one.
- **Event-driven architecture:** Isolated boundaries of the system get informed about changes made in other subsystems by listening to occurred events.

Systems Developer:

- **C:** Develop fast, reliable and concurrent tools, services or linux kernel modules in ANSI-C using GNU Toolchains (GCC, Make, Autoconf) and CMAKE.
- **Go:** Implement various service-oriented applications and plugins using Google's go lang.
- **PHP:** Create service workers, web services and web applications in PHP using object-oriented paradigm. Experienced in some frameworks such as Symfony and Phalcon.
- **XSLT:** Transform XMLs into another xml, xhtml, json, csv or ... using XSLT engines like XSLTProcessor, Xalan or GNOME libxslt in C or PHP.

What can I do

Embedded Systems Developer:

- **Software Development:** Create low-level embedded softwares using ANSI-C beside GCC-AVR for ATMEL AVR Microcontrollers.
- **Bootloader:** Configure and develop DAS U-Boot to be ported to target embedded board.
- **Embedded OS:** Use Yocto and BitBake to build an embedded linux.
- **Hardware Design, Analysis and Simulation:** Perform circuit analysis and simulation using Proteus and Cadence PSpice softwares.
- **Printed Circuit Board:** Design multi-layered PCB by ALTIUM Designer or KiCAD.
- **SIL Test:** Design Software-in-the-loop simulation in presence of Dymola as dynamic plant model and MATLAB & Simulink as controller connected over OPC.

What can I do

DevOps Engineer:

- **Docker:** Handle development and deployment processes using minimal docker images and task oriented containers to obtain secure isolated symmetric environments with most manageability and fastest upgradability in mind.
- **CI/CD:** Automate test, build and release stages using Github/Gitlab CI/CD. Tests get run, software gets built and packed into docker images and deployed using helm charts onto the cloud platform.
- **Ansible:** Use Ansible to perform repetitive tasks on deployment nodes.
- **Kubernetes:** Host deployment Docker containers on Kubernetes platform to achieve automatic redundancy and horizontal scaling.
- **Vagrant:** When docker-compose is missing, use Vagrant to create a portable development environment for docker containers.
- **Bash/Perl Script:** Write once, run multiple times. Create handy tools and set of commands to be run on multiple hosts.

User Interface Developer:

- **Javascript:** Create client-side single-page web applications in Vanilla JS or React which communicate to server over AJAX (RESTful using Swagger) or WebSocket. Automate development-time tasks using gulp.js or webpack.

Where have I been

Software Engineer @ Snapp Group

Oct 2023 - Present

Hybrid, Tehran, Iran

- **Software architect and developer:** Designed fintech use-cases in autonomous contexts and an in-house service registry over Redis to let loosely-coupled service providers get discovered.

Software Engineer @ Qlub

Oct 2021 - Oct 2023

Remote, International

- **Core backend developer:** Development of core features like bill sharing, split helpers, bill additives, discount mechanisms, distributed restaurant reporting engine and technical functionalities like pos worker discovery and pos adapter sdk.
- **Point-of Sale integrator developer:** Integrate Qlub with important and tricky pos systems using different mechanisms such as api call, websocket communication & in-house database access. Some of those pos systems were: Oracle Micros/Symphony, Doshii, Tissl & Sapaad

Software Engineer @ Tashilcar

Apr 2020 - Nov 2021

Tehran, Iran

- **Software Architect:** Designed whole ecosystem in isolated microservices which communicated asynchronously using events (event-driven). Almost separated commands & queries circuits. Used both orchestration & choreography patterns to get workflows done over async inter-services communication.
- **Backend Developer:** Implemented loan facilities & car deals business by Golang in multiple microservices communicating over nats. Using domain-driven design concepts to discover domains and design bounded contexts to model realities in software world.
- **DevOps Engineer:** Deployed services on staging & production environments using Gitlab CI/CD.

Where have I been

Founder & Chief Technology Officer @ Janstun

Jul 2017 - Mar 2020

Tehran, Iran

- **CTO:** Lead software development teams, exchange issues and states between dev team and product owner, gather information from domain experts, document model classes and application use cases in form of UML diagrams and schedule product deadlines.
- **Software Architect:** Find the appropriate model that solves domain problems, split it into bounded contexts and design related software modules.
- **System Developer:** Implement modular, distributed and reliable services using Go.
- **DevOps Engineer:** Make development and deployment environments ready. Achieve Continuous Integration/Continuous Delivery procedure using Docker, Kubernetes, Task runners and Ansible.

Golang Developer @ Ronak Software Group

Mar 2016 - Jul 2017

Tehran, Iran

- **Software Architect:** Design microservices, communicating over nats messaging platform.
- **Backend Developer:** Develop File Storage and ESMTTP services of nested.me backend.
- **DevOps Engineer:** Create development and deployment environments using docker and docker-compose. Automate CI/CD using Gitlab.
- **Frontend Developer:** Develop nested.me web application using angularjs connected to backend over websocket.

Where have I been

Research & Development Manager @ Ghasedak Software Co.

Apr 2015 - Mar 2016

Tehran, Iran

- **System Developer:**
 - Offline Charging System (OFCS): Read ber encoded CDR data from ftp (produced by 4G and VoIP access switches) and convert it to interim-update packets using Go and Perl to let netbill AAA process them.
 - DataCener Infrastructure Management (DCIM): PHP application using Phalcon PHP framework.
- **Scrum Master:** Introduced and migrated many project management procedures to Scrum agile methodology.
- **R&D Manager:**
 - Version Control (Git): Introduced version control system need, taught its usage and scenarios, migrated already existed projects to git hosted over local Gitlab.
 - Digital Issue Tracking (Redmine): Set up local Redmine for documentation, issue tracking, task management and time tracking.
 - Container-based environments (Docker): Dockerized some projects and set up a private docker registry
 - Carrier-grade NAT (CGNAT): Supervised production of CGNAT software and set up test and pilot phases.

XSLT Developer @ Azmoona

Feb 2015 - Dec 2015

Tehran, Iran

- **XSLT Developer:** Export exam questions and answers out of an MSWord document into an XML using C & XSLT.

Embedded Software Developer @ Freelance

Sep 2014 - Present

Tehran, Iran

- Automatic oven control microprocessor system
- 3D Printer: Print using resin as material and projected ultraviolet to dry resin.
- Trailing Edge Dimmer: Controlled over Serial, LAN and WiFi. Be able to dim 2kw loads.

Where have I been

Embedded Software Developer @ Petroleum University of Technology

Apr 2014 - Jan 2016

Tehran, Iran

- **Embedded Developer:**

- Research about comparison of well-known PLC firmwares, operating systems and runtime controller softwares.
- Test top embedded operating systems in the loop: QNX, VxWorks, NetBSD, Siemens 6ES7, NuttX, Plan 9, Embedded Linux
- Create custom Embedded Linux using Yocto and Linaro, Develop a Board Support Package (BSP) layer
- Select and develop PLC firmware based on DAS U-Boot
- Design, Select and Develop PLC core runtime software parts and logic transfer procedure using CODESYS, Copalp Straton T5, Beremiz
- Select and Develop PLC logic programming IDE using CODESYS, Copalp, Beremiz

- **Software Developer:**

- Adaptive Unscented Kalman Filter Matlab plugin: Regeneration of modelling phase missing input data by creating AUKF Matlab plugin using C and running it attached to dynamic model in Matlab.
- Development of custom Fuel Gas model used in simulation of pressure reduction turbo compressor on Dymola.

Backend Developer @ Kowsar

Nov 2012 - Mar 2015

Tehran, Iran

- **PHP Developer:**

- Development of Neoscriber v3, online journal management system, and its proprietary PHP framework.

- **XSLT Developer:**

- Convert MSWord to Pubmed XML
- Convert Pubmed XML to JSON, Crossref XML, Open J-Gate XML and DOAJ XML
- Convert MSWord Equation MML to Presentation MathML, LaTeX and PDF (XSLT + texlive)

Where have I been

Fullstack Developer @ E2Soft

Nov 2011 - Jul 2012

Tehran, Iran

- **Javascript Developer:** Develop SPAs using Ext JS and qooxdoo frameworks and Raphaël library for animations.
- **PHP Developer:** Create webapp backend services.

Electrician @ Eximpower UPS

Jul 2011 - Nov 2011

Tehran, Iran

- **Technician:** Repair, test and installation of Uninterruptible Power Supply (UPS).

Junior Software Developer @ Luxur (TTT)

Jun 2010 - Jun 2011

Tehran, Iran

- **Database Engineer:** Model accounting workflow and document it as ER Model diagrams.
- **.Net Developer:** Implementation of automation software using Visual Basic .NET, Microsoft Access and Microsoft SQL.

Industrial Machine Operator @ Butane Industrial Company

Jun 2008 - Sep 2008

Tehran, Iran

- **Worker:** Drilling, threading and other machining processes operator.

Academic Qualificaions

Islamic Azad University, Karaj Branch

Bachelor of Engineering - BE, Electrical and Electronics Engineering

2011 - 2018

Self Studies

Domain-Driven Design - Tackling Complexity in the Heart of Software

Eric Evans (2003)

Patterns of Enterprise Application Architecture

Martin Fowler (2002)

Patterns, Principles and Practices of Domain-Driven Design

Scott Millett (2015)

Implementing Domain-Driven Design

Vaughn Vernon (2013)

Understanding and Using C Pointers

Richard M. Reese (2013)

Goodreads