

# Hadi Lashkari Ghouchani

## Software Engineer

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## Summary

Dedicated software developer with 19+ years of experience, including 9 years in professional Android development. Skilled in software architecture, algorithm design, and machine learning applications.

- Expertise in creating scalable, maintainable, and efficient software
- Strong advocate for SOLID principles, SSOT, pure functions, and stateless design
- Passionate about applying machine learning to improve human life
- Experience teaching algorithms and programming at university level
- Committed to continuous learning and open-source contributions

Seeking opportunities to leverage extensive software development background and growing machine learning expertise to create innovative solutions. Eager to collaborate with creative, motivated teams in challenging technical environments.

## Experience

### Software Engineer -> Productivity Engineer

at Bell Canada (via MobileLIVE)

Aug, 2022 - Oct, 2024

Toronto, Canada

Promoted to Productivity Engineer.

Mission:

- Resolved VPN network proxy and self-signed certificate issues by developing an automated installation script and Jetpack Compose Desktop app, resulting in a 164% increase in build count on the Gradle Enterprise(Develocity) dashboard.
- Initiated and implemented Gradle Conventional Plugins to reduce code duplication and errors. Established Single Source of Truth (SSOT) for external library versions, significantly reducing runtime crashes caused by version conflicts.
- Spearheaded the adoption of Merge Trains and Merge Request Pipelines in GitLab, creating a Proof of Concept (POC) workflow that demonstrably improved code quality and streamlined the integration process.
- Optimized test execution, reducing runtime by 52% and improving overall development efficiency.
- Served as the primary resource for build-related training and support across a team of 50+ Android developers, enhancing team productivity and knowledge sharing.
- Implemented a custom No-Framework dependency injection solution across multiple app and library repositories, enhancing modularity, testability, and maintainability while minimizing build times by avoiding code generation.
- Integrated Detekt to verify code quality in the merge request's pipelines.

Additional Technologies:

- Develocity(Gradle Enterprise), Gradle Conventional Plugin, Jetpack Compose Desktop, Detekt

### Software Engineer

at Bell Canada (via MobileLIVE)

Apr. 2021 - Aug. 2022

Toronto, Canada

MobileLIVE: A Canadian tech-service provider specializing in digital transformation solutions. Bell Canada: Canada's largest telecommunications company, offering mobile services (Bell Mobility, Virgin Mobile), television (Bell Satellite TV, Bell Fibe TV), and internet services across the country.

Mission:

- Implemented a Request for Comments (RFC) process for technical decision-making, streamlining the evaluation and adoption of new ideas across the organization.
- Led regular knowledge-sharing discussions across the team on SOLID principles, modularization best practices, feature flag implementation, and monorepo architecture, elevating the team's overall code quality and architectural design skills.
- Conceived and executed an automated system for cloning and building source code across a multi-repo setup, significantly reducing version conflicts and enhancing code visibility for efficient debugging.

Technologies:

- Kotlin Coroutines / Mockk, Mockito, JUnit, etc.
- Agile, Sprint, Lane based branching strategy, CI/CD
- Atlassian Jira, Atlassian Confluence, Gitlab, Jenkins, Slack, Branch.io, inVision, Dynatrace, etc.

### Staff Android Developer

at iFood (via Letgo)

Oct. 2020 - Mar. 2021

Barcelona, Spain

iFood is a leading food delivery platform, dominating markets in Brazil, Colombia, and Mexico. It's the market leader in Latin America with 50+ million Android app installations.

Mission:

- Spearheaded the implementation of composite build for Gradle dependency management, reducing incremental build time from 13+ minutes to under 60 seconds when updating libraries.
- Developed the Android component of a cross-platform metadata project, contributing to a comprehensive dashboard that unified information from highly modularized Android/iOS projects (200+ modules) with backend data.
- Initiated and executed a strategy to refactor legacy code out of the root module, resulting in a 55% decrease in incremental build time and improved overall system architecture.
- Identified and resolved multiple Application Not Responding (ANR) issues by applying robust architectural principles, significantly enhancing app stability and user experience.
- Engineered custom wrappers for external libraries to improve error handling and system resilience during critical failures.

Technologies:

- Dagger 2, Room, Kotlin Coroutines, Moshi, WorkManager / Mockk, Robolectric, JUnit, etc.
- Agile, Sprint, Github Flow, CI/CD, Gradle Enterprise
- Atlassian Jira, Atlassian Confluence, Github, Jenkins, Slack, Databricks, Firebase, Bugsnag, Logzio, etc.

### Senior Android Developer

at Letgo: Leading Classified Marketplace

Oct. 2019 - Mar. 2021

Barcelona, Spain

One of the largest classified marketplaces in the United States at the time. Market leader in Turkey with 15+ million Android app installations. Mission-critical achievement: Optimized feed loading performance, reducing launch time by over 60 seconds.

### Lead Android Developer

at Sheypoor: Top-Tier Classified Marketplace

Jan. 2018 - Jan. 2019

Tehran, Iran

Impressive user base: 13+ million overall users, 1.5+ million daily active users. High engagement: 344+ million sessions. Key Achievement: Spearheaded initiatives that tripled daily active users from 500,000 to 1.5+ million within one year.

### Senior Android Developer

at Myket: Top-Tier App Store and Social Network

Sep. 2015 - Des. 2017

Tehran, Iran

### Java and C# developer

at Soha System

Mar. 2015 - Aug. 2015

Tehran, Iran

## Article / Repository

- 🔗 2024 C Numbers: This is a collection of number types, including floating numbers and p-adic numbers.
- 🔗 2024 Contribution to HF Candle: HF Candle is a Rust alternative to work with LLMs.
- 🔗 2024 City of Toronto RAG GPT: The project received the second position award in the TMLS Hackathon.
- 🔗 2024 Hair Segmentation: A ML model to detect and segment hair in images
- 🔗 2024 dragon detector: A simple ML model to detect dragon in images
- 🔗 2024 Sample Rust App: A sample app to crawl an API and put the data in a database.
- 🔗 2024 Nix Effect pod: Modularize effects of all kinds, and stay in-control, with NixOS and podman.
- 🔗 2023 Sample App: Refactored a Mastodon client app to a modularized Jetpack Compose-driven architecture.
- 📖 2023 Post: Dependency Inversion Principle
- 🔗 2023 Contributing to nixpkgs/androidenv: Nix is a language that is designed to have reproducibile output.
- 📖 2022 Post: Logic Tree in Android
- 🔗 2022 Sample App: Molecule sample app to solve some scoping problems in Android development.
- 📖 2022 Post: Reproducibility
- 📖 2021 ProAndroidDev post: Are feature flags, build variants, and sample apps related concepts?
- 📖 2021 iFood Engineering post: Modularization tip: optimize the Root Module.
- 📖 2021 ProAndroidDev post: Happy Railway. An improvement for Railway Oriented Programming in Kotlin.
- 🔗 2021 Library: Happy is a library to auto-generate Kotlin code to make calling APIs more concise.
- 🔗 2020 POC: Rust Flutter Reactive is an idea to use Flutter as UI and Rust for the main project.
- 🔗 2020 Make Log4k Multiplatform: Simple logging library for Android, iOS, Mac, etc.
- 📖 2020 ProAndroidDev post: A/B Testing Myths
- 🔗 2020 Sample App: Provide a full implementation for a No-Framework Dependency Injection in Kotlin
- 🔗 2020 Contributing on Arrow Library: Arrow is a library for Typed Functional Programming in Kotlin
- 🔗 2020 Library: A Kotlin compiler plugin that generates trackable method
- 📖 2020 Medium post: Save State By Using RxJava or Kotlin Flow
- 📖 2020 Medium post: RxJava instead of LiveData in MVVM
- 🔗 2020 Library: A glue between the lifecycle of LifecycleOwner in Android and upstreams in RxJava
- 🔗 2020 Library: A glue between the lifecycle of LifecycleOwner in Android and Kotlin Coroutines
- 🔗 2020 Library: Simplifier for unnecessary complex lifecycles
- 🔗 2019 Sample App: Functional Programming + Clean Architecture
- 🔗 2019 Sample App: Movie Challenge
- 🔗 2019 Math Library: Modularized, mathematical and multiplatform Kotlin library
- 📖 2018 ProAndroidDev post: Logging in Kotlin
- 🔗 2018 Log4k Library: Easy logging library, but unfortunately it's in Sheypoor repository
- 📖 2018 ProAndroidDev post: Reactive MVVM architectural pattern

## Education

Sharif University Of Technology

M.Sc

in Physics

Feb. 2010

Tehran, Iran

Payame Noor University

B.Sc

in Physics

Jul. 2007

Mashhad, Iran

## Tools / Skills

### Machine Learning

Tensorflow/Keras/OpenCV  
Numpy/Ultralytics/PyTorch  
LLM/RAG/GenAI/LangChain/HF Candle  
Supervised/Unsupervised  
KMeans/Principal Component Analysis  
Hugging Face/Replicate/Paperspace

Professional Summary, Interests, and Insights:  
Passionate about computational efficiency, \ with a focus on optimizing complex algorithms\ for practical day to day applications.

### Android

Lifecycles/LiveData/Navigation/Paging/ViewModel  
Multidex/Test/Data Binding/WorkManager/Room  
Android Architecture Components/JetPack  
Anvil/Dagger 2/RxJava 2/Retrofit 2/...  
Kotlin Multiplatform/Kotlin Coroutines  
Kotlin Compiler Plugin/KSP/...  
Compose/Data Binding/View Binding/...

Professional Summary, Interests, and Insights:  
- Android is partially open source OS.  
- Generally interested in distributed computations.

### Rust

actix/rusqlite/tokio/thiserror/crossbeam  
tonic/prost/openssl/flatbuffers/thrift  
Rc/Arc/Mutex  
FFI

Professional Summary, Interests, and Insights:  
- Rust's type system is what you need for scale-up.  
- Borrow Checker restricts stops any memory leaks.  
- The second most efficient programming language.

### Zig

zigcoro/Metaphor  
Professional Summary, Interests, and Insights:  
- C is the language for humanity's best software.  
- Zig is a safer C.

### Podman/Docker

Buildkit/Compose/Cache

Professional Summary, Interests, and Insights:  
- Reproducibility is the key to productivity.  
- Isolation is the key to reproducibility.

### Nix

NixOS/Nix Darwin  
mkDrviation/mkShell

Professional Summary, Interests, and Insights:  
- Reproducibility and isolation are guaranteed.  
- Respecting pure functions, building block of caching.  
- More consistent caching experience than containers.  
- Honored to be a NixOS Maintainer (2023-Present).

### Software Architecture

Clean Architecture/Hexagonal Architecture  
Unidirectional data flow Architecture  
Logic Tree Architecture  
MVVM/MVI/MVP/RMVVM

### Principle

Clean Code/SOLID  
Object Oriented Programming  
Functional Programming  
Stable Dependencies Principle  
Stable Abstractions Principle

### Design Pattern

Factory/Builder/Singleton/...  
Adapter/Facade/Proxy/Visitor/Delegate/...  
Strategy/Chain of responsibility/...

### Android test library

JUnit/Mockito/Espresso/JaCoCo/...

### Build Tool

Nix/Gradle/Cargo/Sbt/Maven/Ant/Make/...

### Command Line Tool

tmux/bash/grep/sed/netstat/awk/podman/...  
adb/sdkmanager/avdmanager/...

### Programing Language

Kotlin/Rust/Python/Java/Scala  
Groovy/Dart/Javascript/Ruby...

### Workflow

Trunk Based development/Github flow/Git Flow  
Cross-functional team

### Operating System

Linux(NixOS/Fedora/Ubuntu/Debian), MacOS

## Achievements and Recognition

- 2024 Second position in AWS Summit's Gameday
- 2024 Second position in Toronto Machine Learning #TMLS Hackathon
- 2020 Had an offer from MobileLIVE, Toronto, Canada
- 2020 Had an offer from iFood, Remote
- 2019 Had an offer from Kik, Kitchener, Canada
- 2019 Had an offer from Letgo, Barcelona, Spain
- 2019 Had an offer from CRITICAL Techworks, BMW, Porto, Portugal
- 2019 Had an offer from The Next Big Thing, Berlin, Germany
- 2018 Received result-oriented badge in Sheypoor
- 2007 Ranked 44th among more than five thousand participants in the National Graduate Entrance Exam in Physics

## Language

English: Advance  
Farsi: Native

The latest version of this resume is available in [github](#)  
Built on October 29, 2024