Mehdi Karami

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Summary

- Proficient Machine Learning scientist with a strong background in developing AI-driven projects, resulting in advanced expertise in model training and performance optimization of algorithms.

- Highly motivated researcher with contributions to open-source projects, demonstrating strong skills in research, project management, and effective communication.

- Experienced programmer proficient in various programming languages and technologies, leading to work as an iOS Developer for an international company, winning a coding competition, holding a workshop, and earning certifications in programming courses.

Education

Bachelor of Computer Engineering   Sep 2021 - Expected Jul 2025

Zand Institute of Higher Education   Shiraz, Iran

GPA: 3.42 (out of 4)

Visiting Student   Feb 2023 - Jul 2024

University of Science and Culture   Tehran, Iran

Research Interests

- Machine learning
- Computational Neuroscience
- Programming Language Theory

- Bioinformatics
- Algorithm Design
- Compiler Design

Work Experience

iOS Developer   Jun 2023 – Jun 2024

<u>Round Table Apps</u>   Development Office, Tehran, Iran

Contributed to the development of diverse, international-scale applications across various domains, including healthcare, finance, and post-transportation.

- **<u>Resilience Box</u>**
  - Healthcare app focused on mental health management, providing online learning resources, well-being videos, an in-depth podcast series, informational fact sheets, and access to counseling and coaching services.

- **<u>Blossom – Save and Invest</u>**
  - Savings app that helped users in Australia and New Zealand reach their financial goals faster by providing access to high-interest savings products.

- **<u>MailPlus</u>**
  - Post-transportation app designed for postal service drivers across Australia.

Technical Contributions:

- Utilized architectural and design patterns, such as Repository, VIP, MVC, and Clean Architectures, to manage project structure and layers.

- Conducting detailed research on the optimal utilization and development of augmented reality (AR) and virtual reality (VR) technologies, utilizing visionOS and other relevant technologies.

- Performed comprehensive research and analysis of data flow to ascertain the behavioral patterns of applications across various scenarios.

- Applied optimization techniques for real-time data processing.

- Implemented algorithms for financial calculations and optimizations.

- Conducted Behavior-Driven Development (BDD) to ensure robust and high-quality code.

- Created detailed documentation with Xcode DocC and Confluence.

- Collaborated with iOS and other teams including BackEnd, Test, Design, FrontEnd, and Android teams, using Scrum, Jira, and other management tools.

Open Source Projects

- **AI Sight Quest**
  - Utilizes AI and machine learning to extract text from images via Apple's Vision Framework and provides instant answers to document questions using the BERT language model.
  - Stack: Machine Learning, Deep Learning, Swift, SwiftUI, SwiftData, Model-view-viewmodel (MVVM), Vision Framework, Speech Framework, TipKit, …

- **Proximity Finder**
  - Implemented with UIKit and MVC for efficient nearest point pair detection on a 2D screen, using Divide and Conquer for O(n log n) complexity. Includes an interactive slider for dynamic point adjustment.
  - Stack: Swift, UIKit, Model-View-Controller (MVC), Algorithm Design, Algorithm Optimization, Core Graphics, …

- **Book Bench**
  - Streamlines library seat reservations. Key features include SignUp, LogIn, and Reset Password views using Firebase Authentication and Database.
  - Stack: Swift, SwiftUI, Model-view-viewmodel (MVVM), Reactive Programming, Lottie JSON, Figma, …

- **Heart Pulse Detector Project (BPM Counter)**
  - Programs a BPM calculator using an Arduino Uno board to check the user's heart rate and display the pulse rate with a chart.
  - Stack: C++, Arduino, PLC Programming, Heart Pulse Sensor, …

- **Command-line Game**
  - Demonstrates programming proficiency through command-line app develop, input and output handling, and game state management.
  - Stack: Swift, Protocol-Oriented Programming (POP), Clean Architecture, …

Explore more projects on my GitHub account.

Volunteering

Workshop on Git and GitHub (Techniques for Effective Collaboration)　　　May 2024

Credential ID 400434784　　　　　　　　　　　　　　　　　　　　　　　Tehran, Iran

K. N. Toosi University of Technology

Contributor of Swift Evolution GitHub Repository　　　　　　　　Since Dec 2023

Participated in the proposals of the Swift Evolution repository.

Honors & Awards

Winning First Place in the C++ Programming Language Competition   May 2022

Hosted by Zand Institute of Higher Education   Shiraz, Iran

Certificates

Swift for Beginners   Issued by Mind Luster

Credential ID 1688271634   Mar 2023

Theoretical understanding of Swift 4   Issued by Sololearn

Credential ID CT-QD4IETGO   Jan 2023

Hobbies

- Swimming
- Esports Gaming (LOL)
- Watching Movies
- Cooking International Cuisine
- Listening to Music
- Engaging with Social Media