# Sarina Hemmatpour

Shahin Shahr, Isfahan Province, Iran

**Sex** Female

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#### EDUCATION

## Bachelor's Degree in Computer Software Engineering

2019 - 2023

Shahid Chamran University of Ahvaz (Jundi Shapur), Ahvaz, Iran

Overall GPA: 16.6/20 (3.36/4) Last 2 years' GPA: 17.4/20 (3.65/4)

Final Project: Gas Company Operations Management System (Android application) GitHub Repository

Advisor: Dr Marjan Naderan

#### **Selected Courses:**

- Software Project (20/20)
- Fundamentals of Computer Vision (20/20)Principles of Compiler Design (20/20)
- o Discrete Mathematics (20/20)

- Logical Circuits (19.93/20)
- o Programming Languages Design (19.5/20)
- o Computer Architecture (19.38/20)
- o Artificial Intelligence and Expert Systems (19.30/20)

## High School Diploma of Mathematics and Physics

2016 - 2019

Farzanegan Highschool, Isfahan, Iran

**Overall Score:** 19.38 / 20

Affiliated with the National Organization for the Development of Exceptional Talents (NODET)

#### INTERESTS \_

Cloud Computing

Software Testing

Natural Language Processing

Compiler Design

- Software Development Methodologies
- Machine Learning

#### WORK EXPERIENCE

# Software Engineer

Jun. 2023 - Present

## Hamyarzaban Company, Iran, Ahvaz

A language learning platform with 700,000+ users

**Backend & Server Management**: Developed and maintained the **Hamyarzaban backend** and **CMS** using **Node.js**. Implemented a custom **NLP core for** the dictionary feature using **Python and spaCy**, enabling contextual word recognition. Configured servers with **Nginx** and **IIS**, an integrated scalable architecture, APIs, and secure deployment environments.

**Android Development**: Contributed to the development of the **Android application** (<u>Hamyarzaban</u>) using **Java**, focusing on UI/UX design, feature implementation, and performance optimization.

## Co-founder & Backend Developer

Feb. 2024 - Present

### Lingolite, Remote

**Product Development:** Conceived and co-developed Lingolite, a language learning platform. Collaborated on the roadmap, structure, and oversaw the UI/UX design process to ensure alignment with project goals.

**Backend Development**: Actively coding the **backend API** using **Node.js**, in partnership with the co-founder, focusing on robust architecture and scalability.

Note: Project currently in development.

#### TEACHING EXPERIENCE \_\_\_\_\_

Logic Circuits Fall 2022

Role: Teaching Assistant

Instructor: Dr Mohammad Rashti

Responsibilities: Graded homework assignments and assisted with Verilog concepts during lab sessions

# Advanced English for Computer Science

Fall 2022

Role: Teaching Assistant

Instructor: Dr Mohammad Rashti

Responsibilities: Graded homework assignments and assisted with course-related English language tasks

## **Fundamentals of Computer and Programming**

Role: Teaching Assistant Instructor: Elham Nikookar

Responsibilities: Developed and graded homework assignments and provided assistance in C++, Object-Oriented Programming (OOP), and

related topics

## **Fundamentals of Computer and Programming**

Fall 2020

Spring 2021

Role: Teaching Assistant Instructor: Elham Nikookar

Responsibilities: Developed and graded homework assignments and designed the final course project

SKILLS

**Programming & Frameworks:** JavaScript, Node.js, Express.js, Java, Kotlin, C++, C, Python, Verilog, WebSocket, RESTAPI **Databases & DevOps:** MySQL, MongoDB, Mongoose, SQL Server, NoSQL, Git, Nginx, IIS, PM2, Cisco Packet Tracer

Mobile & Software Development: Android (Kotlin, Java), OOP, Multithreading, Software Design Patterns, SOLID design principles, Software Development Methodologies such as Scrum and Agile

PROJECTS

## Komak Daroo (Android)

App in Café Bazaar

**Android** application for reminding users of medicine schedules using **Alarm Manager**. Features include adding doctors, medicines, and setting custom alarms.

# Airport Management System

**GitHub Repository** 

Developed an Airport Management System using **JavaFX** and the **MVC architecture**. The system manages various airport operations, providing an intuitive user interface.

## Word Puzzle Game (Android)

GitHub Repository

Developed an interactive word puzzle game using **Java** and **Android SDK** with level-based gameplay, custom views, and dynamic character selection.

## To-Do List App with MVP Architecture (Android)

GitHub Repository

Built an **Android** to-do app using **MVP pattern** and **Room database**. Features include task **CRUD** operations, importance levels, search, and detail view with live updates.

#### Android File Manager App (Android)

GitHub Repository

Built a file manager app in Java with folder creation, search, grid/list view toggle, and file operations (copy, move, delete) using external storage.

## Android Music Player App (Android)

GitHub Repository

Developed a full-featured music player in **Java** with playlist UI, playback controls, shuffle/repeat modes, and real-time slider sync using **MediaPlayer API**.

## Library Database Design with SQL

**GitHub Repository** 

Designed and implemented a **relational database** for a library system using **SQL** scripts with views, stored procedures, and normalized schema structure.

#### Hotel Management System Analysis (UML Project)

**GitHub Repository** 

Designed and analyzed a hotel management system using **UML** diagrams, including use case, class, and sequence diagrams.

## Romania Map Pathfinding (Discrete Math Final Project)

GitHub Repository

Implemented Dijkstra's algorithm in Java to find the shortest path between cities on the Romania graph.

### Template-Based Linked List Library

**GitHub Repository** 

Built a generic doubly linked list in C++ with features like insertion, deletion, search, sort, and reverse.

#### Robot Simulation for Obstacle Avoidance and Pathfinding

GitHub Repository

Developed a robot simulation using **Webots**, implementing **obstacle avoidance** and **wall-following** algorithms. It involved designing a robot capable of navigating a simulated environment, detecting obstacles, and finding the optimal path using **backtracking** and **heuristic** methods.

## Search Algorithms for 8-Puzzle Solver with GUI (Al Course Project)

**GitHub Repository** 

Developed a **Java-based** interactive 8-puzzle solver integrating **Uniform Cost Search**, **Iterative Deepening Search**, **A\***, and **Iterative Deepening A\* algorithms**. Designed a user-friendly GUI for input and visualization. Implemented custom **heuristics** and **state-space exploration** with **cycle avoidance**.

## Sudoku Solver with Al Techniques (Al Course Project)

GitHub Repository

Solved Sudoku puzzles using backtracking with forward checking, MVR, and degree heuristics in Java.

### Packet Capture & Scan Detection (Networks Course Project)

**GitHub Repository** 

Analyzed PCAP files using Scapy in Python to extract protocol stats and detect scanning attacks via TCP flag analysis.

LANGUAGES \_\_\_\_\_

#### Persian

Native

### **English**

IELTS Academic 8 (Listening: 9, Reading: 9, Writing: 7, Speaking: 7.5)

TRAINING COURSES AND CERTIFICATES \_\_

# Mastering Text Rewriting and Paraphrasing for Academic and Professional Writing

Jun. 2025

Faradars Organization, instructed by

#### Python Programming Essentials

Jun. 2025

Faradars Organization, instructed by Dr. Pejman Eqbali

# Python Applications with Practical Examples

Jun. 2025

Faradars Organization, instructed by Eng. Abbas Mohammadi

### **Deep Learning**

May. 2023

Shahid Chamran University of Ahvaz, Computer Engineering Scientific Association

#### Security+

Mar. 2022

Shahid Chamran University of Ahvaz, APA Center

Network+

Dec. 2021

Shahid Chamran University of Ahvaz, APA Center

REFERENCES

# Dr Marjan Naderan

Associate Professor, Department of Computer Engineering, Shahid Chamran University of Ahvaz <a href="mailto:m.naderan@scu.ac.ir">m.naderan@scu.ac.ir</a>

#### Dr Mahmood Farokhian

Assistant Professor, Department of Computer Engineering, Shahid Chamran University of Ahvaz farokhian@scu.ac.ir