

# Nazanin Rezaee Qotb Abadi

UNDERGRADUATE COMPUTER ENGINEERING AND INFORMATION TECHNOLOGY STUDENT

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## Education

### Bachelor of Science in Computer Engineering and Information Technology

Shiraz, Iran

SHIRAZ UNIVERSITY OF TECHNOLOGY

Sep. 2021 - PRESENT

- GPA: 18.02/20.00 (3.88/4)

### HIGH SCHOOL Diploma - SPECIALIZED IN EXPERIMENTAL SCIENCE

Shiraz, Iran

NATIONAL ORGANIZATION FOR DEVELOPMENT OF EXCEPTIONAL TALENTS (NODET)

2017 - 2020

- GPA: 19.42/20.00 (4/4)

## Research Interest

- Artificial Intelligence
- Deep Learning & Machine Learning
- Computer Vision
- Image Processing
- Software Engineering

## Honors & Awards

2021- **Ranked 2<sup>nd</sup> among 30+ Students**, Department of Computer Engineering & Information Technology, Shiraz University of Technology

Shiraz, Iran

2021 **Ranked within the top 2% among 126000+ participants**, in the National University Entrance Exam for Bachelor's degree - Math and Physics

Shiraz, Iran

2013 **Admitted**, in the entry exam to NODET High Schools (National Organization for Development of Exceptional Talents)

Shiraz, Iran

## Technical Skills

### PROGRAMMING LANGUAGES

Proficient **Python, C, C++, C#, Java, HTML, CSS, JavaScript**,  
Familiar **SQL, Assembly Languages, MATLAB, Kotlin, VHDL, LaTeX**,

### ENGINEERING SOFTWARE

Proficient **Figma, Adobe Photoshop, Adobe XD**,  
Familiar **Proteus, CodeVision AVR**,

### GENERAL SOFTWARE

Proficient **Microsoft Office**,

## Research Experience

### Real-Time People Counting System - Deep Learning

Oct. 2024 - Present

RESEARCH ASSISTANT UNDER SUPERVISION DR. ALI SADEGHI

Shiraz University of Technology

- Developing a deep learning-based system using YOLOv8 to estimate the number of people in images with real-time detection capability.
- The system addresses challenges like crowd density and varying lighting conditions for applications.
- Tools & Technologies used: Python, PyTorch, YOLOv8, OpenCV, data annotation, hyperparameter tuning, real-time processing.

## Work Experience

### HAMPA Energy Engineering and Design Company (HEDCO)

Shiraz, Iran

INTERNEED AT SOFTWARE DEVELOPMENT DEPARTMENT

Summer 2024

- Learned Front-End programming languages including **HTML**, **CSS**, and **JavaScript** and also designed a user interface for HTMS with **Figma**.

### Council of Computer Engineering Student Scientific Association, Shiraz University of Technology

Shiraz, Iran

DEPUTY SECRETARY

Jun. 2023 - Jun. 2024

- Held university open day event.
- Prepared student and faculty meetings.
- Prepared referral day ceremony event for new students.
- Holding courses and contests related to the computer engineering field.
- Holding **ICPC** (International Collegiate Programming Contest) for SUTECH (Shiraz University of Technology) students.

### VORNA Company

Shiraz, Iran

WORKED AS UI/UX DESIGNER

Aug. 2023 - Feb. 2024

- Designed user interface (UI) for some websites with **Figma**.
- Designed posters, brochures, visit cards with **Figma** and **Adobe Photoshop**.
- Please visit **Dribbble** to see some of my works.

## Academic Projects

### Cat Classifier Model

Course Project - Fall 2024

DEEP LEARNING SPECIALIZATION COURSE

Python

Designed and implemented a cat image classification model using two approaches:

1. Logistic Regression with a Neural Network Mindset: Developed a binary classifier for cat recognition using logistic regression. And implemented cost functions, gradient descent, and backpropagation from scratch.
2. Deep Neural Network for Image Classification: Built a multi-layer neural network with activation functions like ReLU and sigmoid.

### Neural Networks for Handwritten Digit Recognition

Course Project - Fall 2024

ADVANCED LEARNING ALGORITHMS COURSE

Python

Implemented Binary Classification and also Multiclass Classification. In Binary classification, I used a neural network to recognize the hand-written digits zero and one. And in Multiclass classification, I also used a neural network but to recognize the hand-written digits 0-9.

### Beauty Salon DataBase Management

Course Project - Spring 2024

DATABASE LAB, SUPERVISED BY ALI SAMANIPOUR

C# - SQL

Implementation of a Beauty Salon DataBase Management System that the database codes implemented in **SQL** and the user interface implemented in **C# - Windows Form Application**.

### Burgess Algorithm

Course Project - Fall 2023

IT PROJECT MANAGEMENT COURSE, SUPERVISED BY DR. ALI SADEGHI

Python

Implementation of Burgess Algorithm that is considered as one of the famous methods for resources leveling in construction industry in **Python**.

### STRATEGO Game

Course Project - Spring 2022

ADVANCED PROGRAMMING COURSE, SUPERVISED BY DR. PIROOZ SHAMSINEJAD

Java

Implementation of the **STRATEGO** Game in Java. Utilized key programming concepts such as: Object-Oriented Programming (OOP) and Data structures (arrays, lists) for game state management. Also implemented game features, including Player move validation and game rules enforcement.

### SUDOKU Game

Course Project - Winter 2022

FUNDAMENTALS OF PROGRAMMING COURSE, SUPERVISED BY DR. PIROOZ SHAMSINEJAD

C++

Implementation of Soudoku Game in **C++**. Gained experience with core programming concepts including Control structures (loops, conditionals) and Functions.

## Teaching Experience

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Fall 2023 **Data Structure**, Holding Tutorial Class, Problem solving, Grading assignments.

*Dr.Rasool  
Esmailyfard  
Dr. Pirooz  
Shamsinejad*

Fall 2022 **Fundamentals of Programming**, Holding Tutorial Class, Problem solving, Grading quizzes and assignments.

## Courses

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### Deep Learning Specialization

*Present*

ONLINE (COURSERA), LECTURER: ANDREW NG

### Machine Learning Specialization

*Fall 2024*

ONLINE (COURSERA), LECTURER: ANDREW NG

### Mathematics for Machine Learning and Data Science Specialization

*Summer 2024*

ONLINE (COURSERA), LECTURER: LUIS SERRANO

### Artificial Intelligence Course

*Feb. 2024 - Aug. 2024*

ONLINE, HOLDING BY IAAA (IRAN ANNUAL AI AWARD)

### Python Course

*Summer 2023*

SHIRAZ UNIVERSITY OF TECHNOLOGY, LECTURER: OMID RAJAEI

## Languages

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### English

FLUENT

The TOEFL iBT test: To be taken on DEC. 18. 2024

### Persian

NATIVE

## References

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### 1.Dr. Pirooz Shamsinejad

ASSISTANT PROFESSOR

Department of Computer Engineering and Information Technology (Shiraz University of Technology)

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### 2.Dr. Ali Sadeghi

ASSISTANT PROFESSOR

Department of Computer Engineering and Information Technology (Shiraz University of Technology)

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### 3.Dr. Rasool Esmailyfard

ASSISTANT PROFESSOR

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