

# Ali Asgari

## Education

- 2019–Present **University of Tehran,**  
*Bachelor of Science in Computer Science*  
GPA – 3.65/4
- 2011–2019 **High School Diploma in Mathematics and Physics,**  
*National Organization for Development of Exceptional Talents*  
GPA – 19/20

## Research Interests

- **Computer Graphics**
- **Software Design**
- **Artificial Intelligence**

## Research Experience

- August 2023 **CNRL**  
— Present Member of the Computational Neuroscience Research Laboratory (CNRL) team developing a framework for efficient simulation of cortical columns on GPUs. My contributions involve implementing 3D visualization that helps real-time managing the neural network and modify the configurations. This makes the networks more understandable and easier to debug.

## Teaching Experiences

- February 2022 **University of Tehran, Teaching Assistant**  
— June 2022 Advanced Programming (instructor: Dr. Abbas Nouzari Dalini)
- February 2023 **University of Tehran, Teaching Assistant**  
— June 2023 Machine Language and Assembly (instructor: Dr Fazel Nadi)

## Projects

### **Visualization for PymoNNtorch, OpenGL, ImGui, Pymonntorch**

- This project visualize 3d and real-time neural network. **(Code)**
- supervisor: Dr. Mohammad GanjTabesh

### **Real-time Visualization of 2D Tensor, OpenGL, ImGui, PyTorch**

- This project is visualization of a PyTorch 2D tensor on Cuda device using OpenGL, without the need to transfer data to the CPU. **(Code)**
- supervisor: Dr. Mohammad GanjTabesh

### **Bracelet in OpenGL, OpenGL**

- This project demonstrates the rendering of a 3D bracelet using OpenGL. **(Code)**
- supervisor: Dr. Reza Aghaizadeh Zoroofi

### **Connect 4 Game, Pygame, Numpy**

- This project is implementation of the classic game Connect 4 using Pygame from Python. **(Code)**
- supervisor: Dr. Hedieh Sajedi

### **Assembler Disassembler, Python, NASM**

- This project is Assembler and Disassembler for a wide range of x64 assembly instructions. **(Code)**
- instructor: Dr. Abbas Nouzari Dalini

## Selected Courses

### **Computer Graphics**

- instructor: Dr. Reza Aghaizadeh Zoroofi
- GPA: 4/4

### **Design and Analysis of Algorithms**

- instructor: Dr. Mohammad Ganjtabesh
- GPA: 4/4

### **Data Structure And Algorithm**

- instructor: Dr. Bagher Babaali
- GPA: 4/4

### **Machine Language and Assembly**

- instructor: Dr. Abbas Nouzari Dalini
- GPA: 4/4

### Advanced Programing

- instructor: Dr. Abbas Nouzari Dalini
- GPA: 4/4

### Database Management Systems

- instructor: Dr. Alireza Khalilian
- GPA: 4/4

### Introduction to Theory of Computation

- instructor: Dr. Mojtaba Mojtahedi
- GPA: 4/4

### Theory of Computation

- instructor: Dr. Mojtaba Mojtahedi
- GPA: 4/4

### Artificial Intelligence

- instructor: Dr. Hedieh Sajedi
- GPA: 4/4

## Skills

Languages C++, C, Python, Assembly, MySQL  
Frameworks ImGui, Numpy, Pandas, Jupyter Notebook  
APIs OpenGL  
OS Windows, Linux

## Honors and Awards

2019 **Top 1% at National University Entrance Examination Among more than 160,000 Participants**

## Languages

English Fluent  
Persian Mother Tongue