

# Payam Nikdel

## Contact Information

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## Education

- **B.Sc. Computer Engineering(Software engineering)** September 2010 - December 2014  
*Shiraz university, Shiraz, Iran*
  - Studied 2 years at University of Tehran as a transferred student.
  - **Ranked First:** Achieved the highest GPA (**17.82 out of 20**) among all B.Sc students.

## Work Experience

- **Android application and web development** April 2012 - September 2012  
*Cafebazaar (a famous reputable App store in Iran)*

We made an android app called Divar with a web site for this application, indeed It is an virtual shop which people can sell their stuff and products to each other. We used Django to make this website on a Linux server. For more information, please visit [Divar web site](#) or download our application from [Bazzar](#) (It is an android app store) .
- **Participate in making English to Persian Translator** September 2011 - January 2012  
*Text processing Lab at University of Tehran*

I worked in the lab of text processing for professor Dr.Faili.  
In this lab, we made a translator to translate English to Persian and vice versa. Indeed, it was a massive project by using c++. For more information visit our translator [web site](#) .

## Awards & Honours

**Ranked 1<sup>st</sup>** in Computer Engineering students . . . . . 2014  
**Ranked 18<sup>th</sup>** in Iranian National Computer Olympiad for university student. . . . . 2014  
Was a member of Shiraz ACM group and **ranked 4<sup>th</sup>** in Kashan ACM competition. . . . . 2010  
**Awarded as the Best Undergraduate Student** in Computer Engineering . . . . . 2014  
**Ranked 12<sup>th</sup>** in JAVACHALLENGE (An artificial intelligence competition) among 155 teams . . . . . 2015

## Teaching Experience

- **Data Structures And Algorithms** University of Tehran  
*Teaching Assistant to Dr.Faili* Fall 2012
- **Fundamentals of Computer Programming** University of Tehran  
*Project Manager to Dr.Hashemi and Dr.Moradi* Spring 2012
- **Artificial Intelligence** Shiraz university  
*Teaching Assistant to Dr.Azimifar* Fall 2013
- **Digital Design** Shiraz university  
*Head Teaching Assistant to Dr. Khunjush* Fall 2013
- **Compilers** Shiraz university  
*Head Teaching Assistant to Dr. Tahayori* Fall 2013

- **Advanced Programming** Shiraz university  
*Teaching Assistant to Dr. Hamze* Fall 2013
- **Digital Design** Shiraz university  
*Head Teaching Assistant to Dr. Khunjush* Spring 2014
- **Artificial Intelligence** Shiraz university  
*Teaching Assistant to Dr. Azimifar* Spring 2014
- **Finite Automata** Shiraz university  
*Teaching Assistant to Dr. Mansoori* Fall 2014

## Selected Projects

- **3D Multiplayer Game With AI** Spring 2014  
*Dr.Khunjush*  
In this project I learned how to make an online game using unity engine. This project helped me to understand how a multiplayer server works, and it made me familiar with game programming; Therefore, I could make a 3D world for a FPS( first person shooter) game, and in this game more than 100 people can play together or against a computer AI.
- **Course Management System** Spring 2012  
*Dr.Khosravi*  
This is a web site based on three layers software architecture. In this project, I made a complete course management system by using J2EE. I learned how to use Hibernate, JAXB, HTML, CSS and JS.
- **GPU Efficient Image Processing** Fall 2013  
*Dr.Khunjush*  
I did this project with my classmate, Tina Khaje, regarding the slow speed of image processing specially for big images. In this project we tried to improve the speed of some image effects using GPU. first, we started using CUDA platform to implement Grayscale, Blurring, Edge detection effects. Then we used GPU optimization techniques to speed up the process, so we achieved 30x speed up for 290 MB image. After that, we learned how to use OPENCL and write our code in OPENCL platform
- **Implementing Minmax and Alpha-Beta pruning in PacMan and Hex game** Fall 2012  
*Dr.Mirian*  
These 2 projects help me to understand Minmax and Alpha-Beta pruning.
- **Control mouse with eyes or hands** Spring 2015  
*Dr.Azimifar*  
This project is about two methods to control a computer mouse. First of all, I searched to find How we can track human eyes. so I found a paper about it(click [here](#) to see the paper); Then I tried to find the eye pupil position when a person looks to 4 corners of screen, and I used these points to understand where he is looking and move the mouse to that position. (You can see the project demo by clicking [here](#)) . For hand detection project, I detected the hand color, (using 6 points on the hand); after that, I found the hand in picture and track it to move the mouse by hand movement.
- **Pure P2P File Sharing Application Written in Python** Spring 2014  
*Mr.Tajbakhsh*  
In this application each peer can add other peers IP or search the Network to find peers, and when a peer finds another one, they will send their peer list to each other. Each peer can ask for a file using, file name or file hash. In this application file hash is required since peer can get a file concurrently from more than one person, and peers can resume the file they are downloading recently.
- **Book Shopping Website** Spring 2013  
*Dr.Fakhrahmad*  
We made this project in a group of 3 students. We used Django to build this web site and implemented it by using MVC pattern. This project helps us to understand how to make a commercial software using software engineering techniques such as Prototyping, MVC pattern, ERD diagram.

- **Making two player 3D game in DirectX**

Fall 2013

*Dr.Rohani*

It was a project for Graphic course. It is a two Player first person shooter game; First player can create a game on his computer, and second player can join the game on second computer over network. In this project, I became familiar with basic of networking and 3D object techniques since I made this project from beginning to end; moreover, I learned how to use animation by using skeleton in DirectX. In this game player can shoot to object or other players, and they will be destroyed after their health was finished. The game starts in Harry Potter quidditch field.

- **Small Game Console**

fall 2012

*Dr.Fatemi*

I made it as a project for microprocessor course; So I learned how to work with GLCD, touch pad, keypad, AVR and ATMEGA 32. In this project my console had 2 games; One of them was, Tic Tak Toe, and another one was, Pong game. Both of them can be played by 2 players using touch pad or keypad.

- **Client Server Program**

Fall 2011

*Dr.Kargahi*

In this project we had to use a client and server socket connection, system call, Non-blocking function call and our program should support all Linux commands. Server always listen to special port and each client can connect to server by using this port. When a client connect to this port, server sends him the command list which it can use. Because server must be up all the time, it had to check the command list file; If this file has been changed recently, server will send it to all peers. In this project we were not allowed to use Multi-thread techniques, so it makes us some difficulties by using only Non-blocking function call.

- **Snake Game With AI**

Fall 2010

*Dr.Hamze*

It was a 2D game which made by using C language, and I called it snake game. In my game players can eat letters and get special abilities. for example, if someone eats "PAC", he can eat other snake and gain points and length, or if he eats "BOMB", he can make a bomb. Each snake can eat heart to gain point and increase its length. My game can be played by three mods one player, two player and against AI. My project ranked 1<sup>st</sup> for it's AI (artificial intelligence) in Advanced programming class.

## Extra Curricular Activities

- **BreakTime In University**

Summer 2013

*Shiraz university*

BreakTime In University is a three-day conference consists of up to 50 different workshops which has been held by a group of university students from the summer of 2007 at Shiraz University. Around 300 talented high school students attend this event every summer and its goal is to help them know their skills and potentials. I had the chance to be a part of the organization team, and I had a workshop about how to make a computer game.

## Technical Skills

- **Languages:**

Python, C, C++, C#, Java, SQL, Python, Verilog

- **Programming Platforms & Framework:**

UNITY, UNREAL, CUDA, PTHREAD, OPENCV, OPENCCL

- **Web Development:**

J2EE, HTML, CSS, JAVASCRIPT, DJANGO

- **Operating System:**

Linux, Windows

- **Other:**

ANDROID, HIBERNATE, LATEX, GIT, MAVEN