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 website 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 website or download our application from Bazzar (It is an android app store) .

- **Participated 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 website .

Awards & Honours

Ranked 1st in Computer Engineering students 2014
Ranked 18th in Iranian National Computer Olympiad for university student. 2014
Ranked 4th in Kashan ACM competition among all national universities. 2010
Awarded as **the Best Undergraduate Student** in Computer Engineering 2014
Ranked 12th in JAVACHALLANGE (An artificial intelligence competition at the Sharif university) among 155 teams. 2015

Teaching Experience

- **Digital Design**   Shiraz university
  Head Teaching Assistant to Dr. Khunjush   *Fall 2014*

- **Finite Automata**   Shiraz university
  Teaching Assistant to Dr. Mansoori   *Fall 2014*

- **Artificial Intelligence**   Shiraz university
  Teaching Assistant to Dr. Azimifar   *Spring 2014*

- **Digital Design**   Shiraz university
  Head Teaching Assistant to Dr. Khunjush   *Spring 2014*

- **Advanced Programming**   Shiraz university
  Teaching Assistant to Dr. Hamze   *Fall 2013*

- **Compilers**   Shiraz university
  Head Teaching Assistant to Dr. Tahayori   *Fall 2013*

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

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 programing; 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.

- **Pure P2P File Sharing Application Written in Python**   Fall 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.

- **Control mouse with eyes or hands**   Fall 2014
  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.

- **Book Shopping Website**   Spring 2013
  Dr.Fakhrahmad

    We made this project in a group of 3 students. We used Django to build this website 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.

- **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

- **Course Management System**   Spring 2012
  Dr.Khosravi

    This is a website 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.

- **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.

- **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.

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- **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 1st for it's AI (artificial intelligence) in Advanced programming class.

- **Snake Robot**   Spring 2005
  Mr.Hshemi

  I made this robot in high school. We used servo motors, an infrared light sensor (for detecting obstacle), a wireless camera (To send back the robot vision) and an ATMEGA32 (It was the center processor of this robot, and it had to control servo motors using infrared light sensor). You can see the project demo by clicking here.

Technical Skills

- **Programming Languages:**
  Python, C, C++, C#, Java, SQL, Verilog

- **Programming Platforms & Framework:**
  UNITY, UNREAL, CUDA, PTHREAD, OPENCV, OPENCL

- **Web Development:**
  J2EE, HTML, CSS, JAVASCRIPT, DJANGO

- **Operating System:**
  Linux, Windows

- **Other:**
  ANDROID, HIBERNATE, LATEX, GIT, MAVEN

Language Skills

- **Persian**   native

- **English**   fluent (TOEFL IBT 94 out of 120)

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.

References

- **Dr. Farshad Khunjush**   Assistant Professor, Shiraz University,   khunjush@cse.shirazu.ac.ir

- **Dr. Zohreh Azimifar**   Associate Professor, Shiraz University,   azimifar@cse.shirazu.ac.ir

- **Dr. Heshaam Faili**   Assistant Professor, University of Tehran,   hfaili@ut.ac.ir