Sina Labbaf

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EDUCATION

***Bachelor of Science** in **Computer Engineering, University of Tehran**, Tehran, Iran*

- Total GPA: 17.49 (out of 20) | 3.7 (out of 4) up to now *2012-present*

***High School Diploma, Shahid Ejheiee High School**, Esfahan, Iran*

- Known as National Organization of Development of Exceptional Talents. *2008-2012*

HONORS AND AWARDS

***IRAN Game Development Contest**, Kashan University, Iran*

- Gained 1st place among all teams on the game jam. *Mar. 2016*

***ACM/ICPC**, Asia Regional, Tehran site*

- Gained 4th place among all teams qualified for the final contest. *Dec. 2014*

***Top Total GPA**, University of Tehran*

- Ranked 1st among all Computer Hardware students in University of Tehran. *2012-present*

***Khwarizmi Students Award**, Iran*

- Gained 3rd place among all high school students in Iran, in Computer Science and Engineering field.
- Accepted in University of Tehran as a reward of the competition. *Oct. 2011*

RESEARCH EXPERIENCES

***Multi-Cast NoC**, University of Tehran*

- Implemented and Simulated few multicast routing algorithms. *Summer 2015*

***Test-Chain Improvement**, University of Tehran*

- Tried to improve test-chain power consumption and test duration. *Fall 2015*

NOTABLE PROJECTS

***Trax Game AI for FPGA**, University of Tehran*

- Implemented an AI player for Trax Game on FPGA using Minimax Algorithm. *Fall 2014*

***UT Robots**, University of Tehran*

- Implemented a SLAM Project using Arduino.
- Implemented a simple SoC and its drivers on FPGA, using NIOS processor. This SoC is able to communicate to IMU sensor and serial camera.
- Experience of working with ARM hard-core on FPGA. *Summer 2015*

***Programmer and Game Designer in UT Game Club (aka GameLab)**, University of Tehran*

- Created a few titles of video games as the programmer and game designer.
  - Unjust (RPG): solving a murder case in a magical world.
  - Pigeon Impossible (multiplayer): Defending some breads against hungry pigeons.
  - Amnesia Phobia (puzzle platform): Swapping between parallel worlds to solve puzzles.
  - Ancient Transience (multiplayer): Fighting to complete a ritual.
  - Pood (shoot 'em up): Shooting enemies coming from Persian carpets' figures.
- Created the game club website (gameclub.ut.ac.ir). *2014-present*

***DonbalRow Mobile Robot Simulator**, Shahid Ejheiee High School*

- DonbalRow can simulate mobile robots and provide feedback using neural network.
- Gained 3rd place in "13th Khwarizmi Students Award". *2010-2011*

***Notable University Final Projects**, University of Tehran*

- **Digital oscilloscope** on FPGA including ADC, VGA controller and … *Digital Logic Design Lab*

- **Pipelined MIPS processor** with branch prediction on FPGA. *Computer Architecture and Lab*
- **Digital piano** that saves and replays songs using SD card. *Microprocessors*
- **B+ tree, graph partitioning and influence detector** in social networks. *Data Structures*
- **Simple router** implementation and simulation in VHDL. *Computer Aided Design*
- **Step counter device** that connects to its computer application program. *Interface Circuits*
- **Motion detector** that uses SIMD programming to obtain more speed-up. *Parallel Processing*
- **New features on Linux Kernel** like semaphore, scheduler, etc. *Operating Systems Lab*
- **Stock market rich internet application** with Tomcat and AngularJs. *Internet Engineering*

2012-present

VOLUNTEERING EXPERIENCES

***Presenter of Linux Festival**, Amirkabir University of Technology, Tehran, Iran*

- Made a presentation about Linux terminal. *2014, 2015*

***Technical Committee**, Iranopen Robocup, Tehran, Iran*

- Referee and technical committee of Iran Open Robocop junior rescue league. *2013, 2014*

***Author**, F1 student journal, University of Tehran*

- Wrote an article about "FOSS" and its influence on people's life.
- Wrote an article about "Game Club" and its activities. *2016*

TEACHING EXPERIENCES

***Teaching Assistant** of **Undergraduate Courses**, University of Tehran*

- HW/SW Codesign (chief TA)
  - Designed completely new assignments on DE0-Nano-SOC kit using ARM and FPGA.
- Electronic Circuits (chief TA)
- Data Structures and Algorithms
- Introduction to Computer Systems and Programming
- Digital Logic Design Lab
- Computer Architecture and it's lab
- Computer Aided Design *2012-present*

SKILLS

Hardware Description Languages:

Verilog (+++), **VHDL** (+), **SystemC** (+)

Programming Languages:

C/C++ (+++): Object oriented and embedded system programming

Java (+++): Object oriented and Internet programming

Game Maker Language (+++), **Python** (++), **JavaScript**(++)

Microprocessors:

AVR (+++), **ARM** (+)

Software and Tools:

- **CAD Tools:** Altera Quartus (++), Modelsim (++), Synopsys Hspice (+), Synopsys Design Compiler (+), Altium Designer(+)
- **Programming Tools:** Intellij Idea (++), Git (++), VIM (++)
- **Office Tools:** Microsoft Office (++), LaTeX (+)
- **Operating Systems:** Linux (+++), Windows (++)

Languages:

Persian (Native), **English** (Fluent, TOEFL score: 109)

REFRENCES

Available upon request