Morteza Mousa Pasandi

Linkedin — Github

SKILLS

- **Programming Languages**: C, C++, Python, Java, Verilog,JavaScript
  Libraries: Tensorflow, Pytorch, OpenCV, Keras, Pillow, React.js

- **Hardware Design**: Xilinx FPGAs with ISE Design Suite

- **Tools and Technologies**: Latex, Git, Qt, Blender — **Game Engine**: Unity, Unreal Engine
  Markups and Design: HTML, CSS
  Soft Skills: Teamwork, Tenacity, Problems Solving
  Languages: English, Persian

PROJECTS

- **Pruning VGG 16 - Tensorflow**: Pruning filters till 60 percent of parameters with 2 percent accuracy drop in cifar10.
- **Early Sensor Fusion - Pytorch**: Tested 4 different Fusion models in Faster-RCNN structure for kitti dataset in 2D detection.
- **Lenet 5 Implementation - FPGA - Verilog**: Implementation of 2 Convolutional Layer with 3 Fully connected Layer for mnist classification.
- **Big Small - Qt - C++**: A simple game that our protagonist could become two times bigger .

EXPERIENCE

- **VIVA Lab** — University of Ottawa, CA
  Research Assistant — Supervisior:Prof. Robert Laganière — *Jan 2021 - Present*
    - **Thesis : Deep Neural Network Pruning and Sensor Fusion in Practical 2D Detection**: Pruning over 4 models in Instance Segmentation and employed 5 different fusion Techninqus in Object Detection

- **HADIP Lab** — Isfahan University of Technology, IR
  Research Assistant — Supervisior: :Prof. Shadrokh Samavi — *Jun 2019 - Mar 2020*
    - **Thesis : Deep Neural Network Pruning in classification models**: Modeling over 30 Pruning deep learning methods and proposing new algorithm where omptimizing near 5 percent of accumulative pruned models' accuracy after finetuning.

- **Teaching Assistant** — Isfahan University of Technology, IR
  Computer Architutre Design — Instructor: Dr. Amir Khorsandi — *Feb 2020 - Dec 2020*

PUBLICATIONS

- "Modeling of Pruning Techniques for Simplifying Deep Neural Networks", Mousa-Pasandi, Morteza, et al. **IEEE International Conference on Machine Vision and Image Processing** (MVIP 2020):   Summarizing over 30 Pruning models into one framework. Arix Access
- "Convolutional Neural Network Pruning Using Filter Attenuation", Mousa-Pasandi, Morteza, et al. **IEEE International Conference on Image Processing** (ICIP 2020): Implementation of Pruning scheme to remove filters with attenuation. Arix Access

EDUCATION

- **University of Ottawa** — Ottawa, On, Canada
  Master of Applied Science in Electrical and Computer Engineering — *Jan. 2021 – Present*

- **Isfahan University of Technology** — Isfahan, Isf, Iran
  Bachelor of Science in Computer Engineering — *Sep. 2015 – Feb. 2020*