

Ramin Fahimi |

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Introduction

Research Interests: *Computer Vision, Geometry and Understanding Structure, Machine learning, Neural Networks and Deep Learning.*

Education

University of Manitoba

Master of Science in Computer Science, Supervisor: Prof. Neil D.B Bruce

Sep 2016 – 18

Iran University of Science and Technology

Bachelor of Science in Computer Engineering, Hardware major

Sep 2011 – 15

Research

Thesis.....

M.Sc thesis: Sequential selection, saliency and scanpaths.

The goal of this thesis is to explore the problem of sequential selection and sampling of image content in detail. Results of this thesis are currently under review at [Behavior Research Methods](#)

B.Sc thesis: Popularity prediction of photos on Instagram

What makes a photo popular in a social network? This thesis tries to design a method to predict popularity of photos using image contents and social cues.

Experiences

Work Experiences.....

AI Scientist

Industrial Skyworks

Feb 19 - Now

- Developing cutting-edge artificial intelligence and computer vision products
- Automatic temporal assessment, point cloud alignment, 3d transformations and 2d optimizations.
- Worked with various photogrammetry softwares and contributed on designing Internal engine
- Developed Anomaly detection/classification products.
- Training neural networks for segmenting marine corrosion and rust.
- Developing Interactive anomaly segmentation product that actively learns features from annotator.
- Deployment of machine learning products using Docker containers and Kubernetes.
- Developed a distributed pipeline for processing RGB/Thermal images and reconstructing point clouds at scale.
- Developing automatic quality assessment module for SFM pipeline.
- Designing a dashboard with live reports and manual quality verification for the distributed data processing pipeline.

Research Assistant at Ryerson VisionLab

Feature binding, segmentation and adversarial perturbations

Nov 18 - Feb 19

Research consultant at Inuktun Services

Visual odometry and SLAM solutions for inspection robots in pipelines

Jan 17 - Jan 18

Research Assistant at Computer Vision Lab

Research on visual attention, deep learning, scene understanding(semantics and geometry)

Sep 16 - Nov 18

Research Developer at SystemNegar <i>AI as service (DeepFace.ir - Deeptext.ir - Mirad.ir)</i>	Sep 15 - Sep 16
Research Assistant at Social Network Lab <i>Study of homophily (love of the same) based on visual contents</i>	Sep 15 - Sep 16
Summer Intern at Social Network Lab <i>Designing a distributed pipeline for crawl, store and post-processing</i>	Summer 2015
Web developer at IUMS <i>Designing a web-based survey system using flask, sqlite, bootstrap</i>	Feb 15 - Apr 15

Teaching Experiences.....

Teaching assistant <i>Operating systems, Advance computer architecture, Advance programming (C++), Programming introduction (Python), Digital electronics, Introduction to electronic circuits</i>	IUST
Grader <i>Operating Systems</i>	UManitoba

Computer skills

ML Frameworks:

Pytorch, Keras, Caffe, Tensorflow, ONNX, Kubeflow, LibSVM

Programming:

Python, C++, MATLAB, Javascript, Bash, Assembly, SQL

Data Analysis:

PCL, Open3D, OpenCV, sklearn, skimage, Pandas, spaCy, NLTK, Scrapy

Photogrammetry & SLAM:

Pix4D, Metashape, Meshroom, 3D Zphyer, Google Cartographer, DSO, ORBSLAM

Data Visualization:

Matplotlib, PyPlot, NetworkX, Gephi, Graphviz, D3JS, Potree

Data Storage:

MongoDB, Redis, Mysql, DynamoDB, Ssqlalchemy

Web Development:

Flask, Django, Celery, Bootstrap, JQuery

Hardware Eng:

Embedd systems: TX2-RPI | FPGA: VHDL, VLSI

System admin:

Linux, ROS, AWS, Docker, Kubernetes, git, Nginx, Server/Network administration

Awards

University of Manitoba Graduate Students' Association travel grant	2019
Graduate Enhancement of Tri-Council Stipends (GETS)	2016-18
International graduate student entrance scholarship (IGESS), UManitoba	2016

Activities

Social media cordinator at UMISA

UManitoba Iranian student association

2017-2018

Executive member at CESA

Computer Engineering Student Association

2014

Organizer of SFD@IUST 2013

SFD is a yearly celebration for Software Freedom

2013

Publications

Unsupervised Learning of Camera Pose with Compositional Re-estimation

WACV2019

Dec 2019

Applications of sequential analysis for eye-tracking data

Behavior Research Methods (revision submitted 2019-11)

Aug 2019

SMILER: Saliency Model Implementation Library for Experimental Research

arxiv.org

Dec 2018

Feature binding, segmentation and adversarial perturbations

WACV2019 (under review)

Jul 2019