Farnaz Farahanipad

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EDUCATION

- **Ph.D.,** Computer Science, University of Texas at Arlington, USA (01/2018-Present)
- **M.S.**, Computer Science, University of Texas at Arlington, USA (01/2016-12/2017)
- **M.S.**, Electrical Engineering, Azad University of Arak, Iran (09/2008- 08/2012)
- **B.S.**, Electrical Engineering, Azad University of Garmsar, Iran (09/2001-04/2007)

SUMMARY OF SKILLS

- **Deep learning:** Knowledge of CNN, RNN, GANs and Experience in deep learning frameworks like Pytorch, TensorFlow and Keras,
- **Machine learning:** Regression**,** Clustering**,** Classification, Data Visualization, QuantitativeAnalysis
- **Computer vision:** Data acquisition and processing, signal manipulation, analyzing andunderstanding digital images, Knowledge in Audio and Video Processing
- **Software and programing skills:** Python**,** MATLAB, C++, ORCAD, Microsoft Office
- **Electronics:** RF sensors, board design and PCB print, diagnostic tests, Electronic boards troubleshooting and repair
- **Teaching:** Experienced and certified in teaching electronics and cell phone repair
- **Languages:** Fluent in English, Proficient in Farsi (Native)

PROFESSIONALEXPERIENCE

- **Graduate research assistant, University of Texas at Arlington (January 2019- present)**
  - ✓ Realtime object detection (YOLO-SSD), Image Segmentation (UNET), Real time Gesture recognition using CNN for Human-Computer Interaction, Develop Novel framework for 2D/3D Pose estimation on Depth image/video through Domain Translation, Data Synthesis (GANs)

- **Deep learning research Intern, uSens Inc., San Jose (September 2018- December 2018)**
  - ✓ Optimize and develop deep neural networks for industry applications)
  - ✓ Collect data from IR/Depth/RGB/Magnetic Sensors for autonomous driving

- ✓ Analysis, preprocess and annotate data using LabelImg
- ✓ Develop hand detection and tracking models using motion detector class combined with background subtraction method
- ✓ Develop Gesture classification model for Augmented/Virtual reality applications

- **University of Texas at Arlington (September 2016- August 2018)**
  - ✓ Graduate research assistant

- **Pars Samtel Co. (Samsung), Tehran, Iran (April 2014- June 2014)**
  Service department manager
  - ✓ Supervised technical department activities, responsible for allinternational correspondence

- **Paud Raad Industrial group, Tehran, Iran (February 2013- August 2013)**
  Electrical Industrial Sales Department
  - ✓ Working with all necessary equipment and software for advanced metering Infrastructure (AMI) networks including Meter Data Management (MDM) software, smart meters, Communication modules and data concentrator unit (DCU)

- **Pars Comtel Inc. (Alcatel & Sony), Tehran, Iran (March 2009- September 2012)**
  Technical manager at Alcatel Department Industrial Sales Department
  - ✓ Supervised technical department: Installation, training, After sale service
  - ✓ Managed technical activities including service logs and reports and quality control

- **Iran Technical & Vocational Training Organization, Tehran, Iran (April 2008- September 2008)**
  - ✓ Teaching Electronic and Cell phone repair

- **Namdaran Telecommunication Co. (Alcatel), Tehran, Iran (March 2007-March 2008)**
  Technical and after sale service Manager
  - ✓ Supervised service department and responsible for international correspondence

- **Siemens Mobile Co. (August 2002-August 2006)**
  Technician for cell phone repair
  - ✓ Software and hardware cellphone repair
  - ✓ Calibration and Quality control

Certificates and Honors

- Python Data Structures certification from Coursera
- Deep learning certification from Coursera
- GAN certification from Coursera
- Certification of Mobile service training from TVTO* (Aug 2008)
- Certification of Mobile service from TVTO (Oct 2002)
- Certification of General Electronic service from TVTO (Sep 2002)

*Technical & Vocational Training Organization

Awards and honors

- External reviewer at Optics Express (2021)
- NFS Doctoral Consortium (DC) award honor 2021
- NFS Doctoral Consortium (DC) award honor 2020
- Graduate teaching a n d r e search assistant scholarship from university of Texas at Arlington
- Winner of the scholarship from Society of Iranian American women for education (SIAWE) 2017
- External reviewer at IEEE International Conference on Bioinformatics & Biomedicine 2016

Publications

- **Farahanipad**, **Farnaz**, Mohammad Rezaei, Alex Dillhoff, Farhad Kamangar, and Vassilis Athitsos. "Apipeline for hand 2-D key point localization using unpaired image to image translation." In *The 14th PErvasive Technologies Related to Assistive Environments Conference*, pp. 226-233. 2021.
- Rezaei, Mohammad, **Farnaz Farahanipad**, Alex Dillhoff, Ramez Elmasri, and Vassilis Athitsos. "Weakly-supervised hand part segmentation from depth images." In *The 14th PErvasive Technologies Related to Assistive Environments Conference*, pp. 218-225. 2021.
- **Farahanipad, Farnaz**, Harish Ram Nambiappan, Ashish Jaiswal, Maria Kyrarini, and Fillia Makedon. "HAND-REHA: dynamic hand gesture recognition for game-based wrist rehabilitation." In *Proceedings of the 13th ACM International Conference on PErvasive Technologies Related to Assistive Environments*, pp. 1-9. 2020.
- Huang, Haiying, **Farnaz Farahanipad**, and Abhay Kumar Singh. "A stacked dual-frequency microstrip patch antenna for simultaneous shear and pressure displacement sensing." *IEEE Sensors Journal* 17, no. 24 (2017): 8314-8323.
- Yang, Gaoqiang, Jingke Mo, Zhenye Kang, Yeshi Dohrmann, Feng-Yuan Zhang, Shahnavaz Eilbeigi, **Farnaz Farahanipad**, and Haiying Huang. "Additive manufactured micro-sensor from silver nanoparticles for measuring shear stress and pressure." In *2017 IEEE 12th International Conference on Nano/Micro Engineered and Molecular Systems (NEMS)*, pp. 164-168. IEEE, 2017.