Resume

Mr. Abdullah Jamal Hamdi (Computer Vision, Ph.D. student)

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Career Objectives

- To develop innovative solutions to human difficult problems based on AI tools. Specifically, I want to utilize less explored adversarial capabilities of deep learning. [video link , article link]

Education

- Perusing my **Ph.D.** in Computer Vision, Electrical Engineering major under Prof Bernard Ghanem, KAUST, Saudi Arabia.
- **MS** in Computer Vision, Electrical Engineering major with GPA **4.0** (out of 4), KAUST, Saudi Arabia. Thesis titled: "Cascading Generative Adversarial Networks for Targeted Imagination" under Prof Bernard Ghanem from 2016 to 2018.
- 14 Credit hours with GPA **4.0** (out of 4) in Texas A&M University, College Station TX, in a student Exchange program from August 2014 to December 2014.
- **BS** in Electrical Engineering in KFUPM with 134 credit hours GPA **3.97** (out of 4) from 2011 to 2016.
- High school certificate with **100%** accumulated percentage grade in Al-Falah high school, Makkah in summer 201.

List of Papers (Google Scholar)

- **Abdullah Hamdi**, Matthias Müller, Bernard Ghanem, "SADA: Semantic Adversarial Diagnostic Attacks for Autonomous Applications", Accepted at AAAI 2020.
- **Abdullah Hamdi**, Sara Rojas, Ali Thabet, Bernard Ghanem, "AdvPC: Transferable Adversarial Perturbations on 3D Point Clouds", Under submission.
- Salman Alsubaihi, Adel Bibi, Modar Alfadly, **Abdullah Hamdi**, Bernard Ghanem, "Expected Tight Bounds for Robust Deep Neural Network Training", Under submission.
- **Abdullah Hamdi**, Bernard Ghanem, "Towards Analyzing Semantic Robustness of Deep Neural Networks", Accepted at ICCV 2019 workshop on Explaining Visual Artificial Intelligence Models [spotlight].
- **Abdullah Hamdi**, Bernard Ghanem, "IAN: Combining Generative Adversarial Networks for Imaginative Face Generation", Arxive 2018.
- **Abdullah Hamdi**, "Cascading Generative Adversarial Networks for Targeted Imagination".[**MS Thesis]**
- **Abdullah Hamdi**, Bernard Ghanem, "Learning Rotation for Kernel Correlation Filter", Arxive 2017.

List of Registered US Patents

- **Abdullah Hamdi**, "Smart dust-cleaner and cooler for solar PV panels" , [Granted] in 2018.

Experience

Science & Engineering

- **2017-now:** Developing deep generative models (GANs), adversarial attacks, 3D deep models and differentiable rendering using TensorFlow and Pytorch for different projects

- **2017-now:** Founder and president of Fihm.ai (online Arabic AI platform with +60K visits/views).
- **2016:** developing visual object tracking and orientation detection vision for UAVs, participating with KAUST team in MBZIRC international competition.
- **2015-2016:** Founder and president of KFUPM Innovation Club (+200 members).
- **2015:** Member in KFUPM president highest advisory student board, and chairman of student activities development committee in the board.
- **2015:** commercial manager summer internship for GE, Power Generation Services, Saudi Arabia for eight weeks.
- **2015**: Leader of Senior Design Project titled " Low cost automatic controlled drones."
- **2013-2015**: leading a research team in "solar trackers of PV panels" granted by KFUPM.

Teaching
- **2019:** Deep Learning Workshop on TensorFlow 2.0, Jeddah Data Geeks, Saudi Arabia
- **2019:** Lecture on GANs, EE354 (Introduction to Computer Vision), KAUST
- **2019:** Lecture on Differentiable Rendering. Group Meeting, KAUST
- **2018:** TA for AMCS 211 (Numerical Optimization MS course), KAUST
- **2017:** Teaching EE311 lectures about design thinking and senior design project development and execution, KFUPN.

List of Awards
- **2017:** Won First place in Entrepreneurship Super Steam challenge for Saudi Universities in KAUST, $ 8000 prize, startup idea: VR labs.
- **2014:** The first-place winner in Nassir Bin Hamad international youth creativity award in science for invention in solar dust cleaning. US Patent: US20150311859 A1 titled "Smart dust-cleaner and cooler for solar PV panels."
- **2014**: One of the top ten inventors in the fifth Scientific conference for higher education in Riyadh, Saudi Arabia.
- **2007-2011**: won in 3 national competitions in math, science, and chemistry
- **2008**: nominated to represent Saudi Arabia in International Junior Science Olympiad for most qualified students in the world in Changwon, Korea.

Skills

General
- Speaking English and Arabic fluently. (scored 107/120 in TOEFEL IBT).
- Computer programming in MATLAB, C++, python, Pytorch, TensorFlow, C#.
- Developing VR games and computer simulations in Unity 3D and UE4.
- Ability to give speeches and crowd presentations (won several competitions).
- Critical thinking and strategic planning.
- Visionary, initiative, and team leader (started innovation club in college).
- Self-learning and fast understanding (shifting from solar to object tracking to deep learning).

Software (GitHub Profile)
- using python TensorFlow & Pytorch to develop, train, and test Deep Neural Nets.
- using Linux based GPU cluster (300 GPUs) to train 100s of deep model.
- Developing VR games using Unity game engine and C# (paper planes game, won VR hackathon in KAUST, 2017).
- using UE4 and Blender to simulate computer vision tasks (e.g. detection and tracking).
- back-end game development using C++ (AI snake game).