Resume

Mr. Abdullah Jamal Hamdi (Computer Vision, KAUST, Saudi Arabia)

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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 **PhD** in 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 Aabia. 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 hight school ,Makkah in summer 2011

List of Papers (Google scholar page here):

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

List of Registered US Patents:

1. Smart dust-cleaner and cooler for solar PV panels : US9899957B2

Experience

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

- **2016:** developing **visual object tracking and orientation detection** vision for UAVs, participating with KAUST team in MBZIRC international competition
- **2015** : commercial manager internship for GE, Power Generation Services, Saudi Arabia for the period of 8 weeks
- **2015**: Leader of Senior Design Project titled " Low cost automatic controlled drones"
- **2014 -2016**: leading research team in "solar trackers of PV panels" granted by KFUPM.

List of Awards

1. **2017:** Won First place in **Entrepreneurship** Super Steam challenge for Saudi Universities in KAUST ,$ 8000 prize, leader of startup idea : VR labs
2. **2014**: The first prize winner and best speaker in the Student Symposium in KFUPM with the proposal titled " the second summer semester"
3. **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"
4. **2014 April**: One of top ten **inventors** in the fifth Scientific conference for higher education in Riyadh, Saudi Arabia
5. **2007-2011** : won in 3 national competitions in **math, science, and chemistry**
6. **2008** : nominated to represent Saudi Arabia in IJSO (**International Junior Science Olympiad)** for most qualified students in the world in Changwon, Korea

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Skills

- 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 Skills (Github Profile here):

- 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)

Leaderships and Memberships:

- Founder and president of Fihm.ai (online Arabic AI platform with +60K visits/views)
- Founder and president of KFUPM Innovation Club (+200 members) from 2015 to 2016
- Member in KFUPM president highest advisory student board, and chairman of student activities development committee in the board. 2015

Teaching:

- 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, 2019
- TA for AMCS 211 (Numerical Optimzation MS course), KAUST,2019
- 3 hours teaching EE311 lectures about design thinking and about senior design project development and execution, under Dr. Mohamed Mohandes.