

Abdullah Hamdi (*Computer Vision*)

Birth:	July 5, 1993, Saudi Arabia
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Career Objective

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

Ph.D. candidate, KAUST **2018-now**

- Computer Vision, Electrical Engineering major under Prof Bernard Ghanem,

MS, KAUST (GPA: 4.0/4) **2016-2018**

- Computer Vision, Electrical Engineering major under Prof Bernard Ghanem.
- Thesis: "Cascading Generative Adversarial Networks for Targeted Imagination"

Exchange, Texas A&M (GPA: 4.0/4) **2014-2014**

- Earned 14 Credit hours in Texas A&M University, College Station TX.

BS, KFUPM (GPA: 3.97/4) **2011-2016**

- Electrical Engineering in KFUPM, Saudi Arabia

Experience

Internships

- **2015:** Summer internship at [GE](#), Power Generation Services, Saudi Arabia.

Academic

- **2019:** Reviewer for 10 CVPR and ICCV papers in adversarial attacks and GANs.
- **2019:** Giving [Deep Learning Workshop on TensorFlow 2.0](#), Jeddah Data Geeks, Saudi Arabia.
- **2019:** Teaching [Lecture on GANs](#), EE354 (Intro to Computer Vision), KAUST
- **2019:** Giving [Lecture on Differentiable Rendering](#). Group Meeting, KAUST
- **2019:** TA for AMCS 211 (Numerical Optimization MS course), KAUST
- **2015:** Leading Senior Design Project, "Low cost automatic controlled drones."
- **2015:** Member in KFUPM president highest advisory student board, and chairman of student activities development committee in the board.
- **2014:** Leading a research team in "solar trackers of PV panels" granted by KFUPM.

Projects

- **2017-now:** Founder and president of [Fihm.ai](#) (online Arabic AI platform with +60K visits/views).

- **2017-now:** Developing deep generative models (GANs), adversarial attacks, 3D deep models and differentiable rendering using TensorFlow and Pytorch.
- **2016:** Developing visual object tracking and orientation detection vision for UAVs, participating with KAUST team that wins [MBZIRC](#) international competition.
- **2015:** Founder and president of [KFUPM Innovation Club](#) (+200 members).

Accomplishments

List of Publications ([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"](#), Arxiv 2018.
- [Abdullah Hamdi, "Cascading Generative Adversarial Networks for Targeted Imagination"](#), MS Thesis.
- [Abdullah Hamdi, Bernard Ghanem, "Learning Rotation for Kernel Correlation Filter"](#), Arxiv 2017.

List of Registered US Patents

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

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: US9899957B2 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.
- **2008:** Nominated to represent Saudi Arabia in [International Junior Science Olympiad](#) for most qualified students in the world in Changwon, Korea.

Skills

Software Skills ([GitHub Profile](#))

- Computer programming in MATLAB, Julia, C++, Python, Pytorch, TensorFlow.
- Using GPU cluster at KAUST (400 GPUs) for large scale experiments.
- Developing VR games using Unity game engine and C# (won VR hackathon).
- Using UE4 and Blender to simulate computer vision tasks (detection and tracking).
- Back-end game development using C++ ([AI snake game](#)).

Soft Skills

- Fluent in English and Arabic (107/120 in TOEFEL IBT).
- Public-speaking (won several competitions).
- Self-learning and adaption (shifting from solar to object tracking to deep learning).