Ahmed Abdelreheem

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Bldg 1, 2106-WS04, KAUST

EDUCATION

King Abdullah University of Science and Technology Thuwal, Saudi Arabia
PhD in Computer Science, Advisor: Prof. Peter Wonka *May 2022 – September 2025*

King Abdullah University of Science and Technology Thuwal, Saudi Arabia
MS in Computer Science, Advisor: Prof. Peter Wonka *March 2020 – May 2022*

Stanford University Remote
Research Internship at Guibas Laboratory under supervision of Prof. Leonidas Guibas *Jun 2021 — August 2021*

Cairo University Cairo, Egypt
BSc in Computer Engineering, GPA: 3.71/4.0, Excellent With Honor Degree *September 2015 – July 2019*

EXPERIENCE

Research Intern, NIANTIC LABS, *London, UK* June 2024 – Nov 2024

- Joined Niantic London Research team as an intern. The work involved fine-tuning 3D LLMs, 3D scene understanding, and 3D scene editing.

Research Intern, SNAP INC., *Palo Alto, CA, USA* June 2022 – October 2022

- Joined Snap Research as an intern at the Creative Vision team. The intern resulted in the following work: link, which is accepted at WACV 24.

Software Engineer, EJAD, *Cairo, Egypt* September 2019 – January 2020

- Worked in the new research team on the ADAS lane detection problem.
- Did research on the used road models and vision-based approaches
- Implemented an initial modular algorithm using vision-based approaches

Research Intern, VALEO, *Cairo, Egypt* February 2019 – May 2019

- Worked on improving pedestrian detection using multispectral (thermal and color) image fusion
- Researched the currently used SoTA models related to the task.
- Implemented the baseline experiments and ported the evaluation metric from Matlab to Python

Software Engineer, BLUECLOUD TECHNOLOGIES, *Cairo, Egypt* September 2018 – January 2019

- Worked as a part-time employee on the HR Interview Bot project on a task to predict the big five personality traits from an HR interview video based on scene, audio and face features

Student Developer, GOOGLE SUMMER OF CODE, *Cairo, Egypt* May 2017 – August 2017

- Joined BRL-CAD organization and worked on adding support for the 3MF file format in Slic3r software and, allowed conversions between different 3D model formats. Slic3r is an open-source G-code and toolpaths generator for 3D printers. Slic3r is written in C++11.
- Added Doxygen documentation for several classes of Slic3r code base, added a test suite for the added code and some features requested by the users

PUBLICATIONS

- PlaceIt3D: Language-Guided Object Placement in Real 3D Scenes
  arXiv preprint, 2025, project link.
  Ahmed Abdelreheem, Filippo Aleotti, James Watson, Zawar Qureshi, Abdelrahman Eldesokey, Peter Wonka, Gabriel Brostow, Sara Vicente, and Guillermo Garcia-Hernando

- ZeroKey: Point-Level Reasoning and Zero-Shot 3D Keypoint Detection from Large Language Models
  arXiv preprint, 2024, project link.
  Bingchen Gong, Diego Gomez, Abdullah Hamdi, Abdelrahman Eldesokey, **Ahmed Abdelreheem**, Peter Wonka, Maks Ovsjanikov

- ScanEnts3D: Exploiting Phrase-to-3D-Object Correspondences for Improved Visio-Linguistic Models in 3D Scenes
  WACV 2024, project link.
  Ahmed Abdelreheem, Kyle Olszewski, Hsin-Ying Lee, Peter Wonka, Panos Achlioptas

- Zero-Shot 3D Shape Correspondence
  SIGGRAPH Asia 2023, project link.
  Ahmed Abdelreheem, Abdelrahman Eldesokey, Maks Ovsjanikov, Peter Wonka

- SATR: Zero-Shot Semantic Segmentation of 3D Shapes
  ICCV 2023 (Poster), project link.
  Ahmed Abdelreheem, Ivan Skorokhodov, Maks Ovsjanikov, Peter Wonka

- 3DCoMPaT++: An improved Large-scale 3D Vision Dataset for Compositional Recognition
  arXiv preprint
  Habib Slim, Xiang Li, Yuchen Li, Mahmoud Ahmed, Mohamed Ayman, Ujjwal Upadhyay, **Ahmed Abdelreheem**, Arpit Prajapati, Suhail Pothigara, Peter Wonka, Mohamed Elhoseiny

- 3DCoMPaT: Composition of Materials on Parts of 3D Things
  *ECCV 2022 **(Oral)***, project link.
  Ujjwal Upadhyay, Yuchen Li, Habib Slim, Tezuesh Varshney, **Ahmed Abdelreheem**, Arpit Prajapati, Suhail Pothigara, Peter Wonka, Mohamed Elhoseiny

- 3DRefTransformer: Fine-Grained Object Identification in Real-World Scenes Using Natural Language
  WACV 2022 (Poster)
  Ahmed Abdelreheem, Ujjwal Upadhyay, Ivan Skorokhodov, Rawan Al Yahya, Jun Chen, Mohamed Elhoseiny

- ReferIt3D: Neural Listeners for Fine-Grained 3D Object Identification in Real-World Scenes
  *ECCV 2020 **(Oral)***, project link.
  Panos Achlioptas, **Ahmed Abdelreheem**, Fei Xia, Mohamed Elhoseiny, Leonidas Guibas

WORKSHOPS

Co-organizing the 3rd Workshop on Language for 3D Scenes, *ICCV 2023*	Link
Co-organizing the 2nd Workshop on Language for 3D Scenes, *ECCV 2022*	Link

AWARDS

Dean's List Award, *$2,500 award to top students by CEMSE division for their academic achievements.*	August 2023
KAUST Fellowship, *King Abdullah University of Science and Technology Fellowship.*	March 2020 – Present
ACM Sigmod Programming Contest securing the 10th place.	April 2021
ACM Egyptian Collegiate Programming, *securing the 80th/200 place.*	October 2018
Egyptian Olympiad In Informatics, *Bronze Medal.*	July 2010

TECHNICAL SKILLS

Deep Learning Software Stacks: Pytorch *(proficient)*, Tensorflow *(familiar)*
Programming Languages: *Proficient with* C++, Python, Java
Additional Skills: *Familiar with* CUDA

ACADEMIC SERVICE

Reviewer for: CVPR 2024 & 2025, 3DV 2024, ICCV 2023 & 2025, ECCV 2024, SIGGRAPH 2024, SIGGRAPH Asia 2023 & 2024, and WACV 2023 & 2024.

TEACHING EXPERIENCE

TA in the "Deep Learning for Visual Computing" course, taught by Prof. Peter Wonka at King Abdullah University of Science and Technology in Fall 2023.