

Deniz Engin

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🌐 Website | 🎓 Google Scholar | 🐙 GitHub | 💼 LinkedIn



Research Interests

Specialties 📌 CV, NLP, Multimodal Learning, Video Understanding, VideoQA

My research primarily focuses on multimodal models, especially in video understanding and VideoQA, leveraging CV and NLP. A significant aspect of my recent work involves the efficient fine-tuning of LLMs, enabling them to adapt to the challenges of VideoQA with minimal supervision and computational power.

Education

- Sep. 2020 – Jun. 2024 📌 **Inria & University of Rennes** - Rennes, France
PhD, Computer Science
Thesis title: Video question answering with limited supervision
Supervisor: Yannis Avrithis
Jury members: Ivan Laptev (Reviewer), Matthieu Cord (Reviewer), Josef Sivic, Karteek Alahari, Luce Morin
- Sep. 2014 – Nov. 2017 📌 **Istanbul Technical University** - Istanbul, Türkiye
M.Sc., Electronics Engineering
Participated in a 5-month Erasmus exchange program at KU Leuven, Belgium
- Sep. 2009 – Jul. 2014 📌 **Istanbul Technical University** - Istanbul, Türkiye
B.Sc., Electronics Engineering
Included a 1-year English language program

Research and Work Experiences

- Sep. 2020 – Feb. 2024 📌 **PhD Student** Inria – Rennes, France
Proposed parameter-efficient zero-shot and few-shot VideoQA: Publication [1]
Proposed a knowledge-based VideoQA method collaboration with InterDigital: Publication [2]
- Sep. 2020 – Jun. 2022 📌 **Researcher** InterDigital – Rennes, France
Worked on multimodal video understanding projects - Video Captioning and VideoQA: Publication [2]
2 Patent Applications
- Jan. 2018 – Mar. 2020 📌 **R & D Engineer Specialist** Yapı Kredi Technology – Istanbul, Türkiye
Developed offline signature detection & verification system: Publication [3]
Developed multimodal document classification system: Publication [4]
- Jul. 2017 – Sep. 2017 📌 **Research Intern** EPFL Signal Processing Lab (LTS5) – Lausanne, Switzerland
Cross-Pose Facial Expression Recognition via Transfer Learning: Publication [5]
- Jul. 2016 – Jan. 2018 📌 **Researcher** ITU SiMiT Lab – Istanbul, Türkiye
Single Image Dehazing via CycleGAN: Publication [6]
Facial Expression Recognition via Transfer Learning: Publication [7]

Selected Publications

- 1 **D. Engin** and Y. Avrithis, “Zero-shot and few-shot video question answering with multi-modal prompts,” in *Proc. ICCV Workshops*, 2023. **[Oral Presentation]**.
- 2 **D. Engin**, F. Schnitzler, N. Q. Duong, and Y. Avrithis, “On the hidden treasure of dialog in video question answering,” in *Proc. ICCV*, 2021.
- 3 **D. Engin***, A. Kantarci*, S. Arslan, and H. K. Ekenel, “Offline signature verification on real-world documents,” in *Proc. CVPR Workshops*, 2020.
- 4 **D. Engin**, E. Emekligil, B. Oral, S. Arslan, and M. Akpınar, “Multimodal deep neural networks for banking document classification,” in *Proc. IMMM*, 2019. **[Best Paper Award]**.
- 5 **D. Engin**, C. Ecabert, H. K. Ekenel, and J.-P. Thiran, “Face frontalization for cross-pose facial expression recognition,” in *Proc. EUSIPCO*, 2018.
- 6 **D. Engin***, A. Genç*, and H. Kemal Ekenel, “Cycle-Dehaze: Enhanced cyclegan for single image dehazing,” in *Proc. CVPR Workshops*, 2018.
- 7 **D. Engin** and H. K. Ekenel, “Facial expression pair matching,” in *Proc. SIU*, 2017.

Skills

- **Programming and Development Tools:** Python, C, Unix Shell Scripting, SQL, Git, Docker
- **Deep Learning Frameworks:** Pytorch, TensorFlow, Keras
- **Language:** Turkish (native), English (fluent), French (beginner)

Summer Schools & Symposiums

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| ICVSS 2022 | ■ International Computer Vision Summer School, Sicily, Italy. (10 - 16 Jul.) |
| ELLIS 2021 | ■ ELLIS Doctoral Symposium, Tübingen, Germany. (27 Sep. - 1 Oct.) |
| PAISS 2021 | ■ PRAIRIE/MIAI Artificial Intelligence Summer School, Online. (5 – 9 Jul.) |

Awards and Achievements

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| 2019 | ■ Best Paper Award at IMMM 2019 |
| 2018 | ■ ECCV Woman in Computer Vision Workshop Travel Grant |
| 2016-2017 | ■ Research Scholarship from National Research & Technical Council of Türkiye |
| 2015-2016 | ■ Exchange Student Grant by Erasmus Program |

Reviewer Activities

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| 2023 | ■ CVPR, ICCV |
| 2022 | ■ ECCV |