Youssef Sherif Mansour Mohamed

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Education:

- **Ph.D. of Computer Science (2022-2026):** King Abdullah University of Science and Technology (KAUST)
- **Master of Computer Science (2019-2022):** University of Tartu, Estonia **(4.92/5) Cum Laude**
- **Bachelor of Communication and Information Engineering (2013-2018):** Zewail City of Science and Technology, Egypt with GPA = **3.95/4 (ranked 2nd), Summa Cum Laude**

Publications:

- **"Towards No Culture Left Behind: Large Scale Multilingual Affective Vision and Language Understanding" Submitted to CVPR 24**
- **"Continual Learning on a Diet: Learning from Sparsely Labeled Streams Under Constrained Computation" Under Review at ICLR 24**
- **"ArtELingo: A Million Emotion Annotations of WikiArt with Emphasis on Diversity over Language and Culture" published in EMNLP 22.**
- **"It is Okay to Not Be Okay: Overcoming Emotional Bias in Affective Image Captioning by Contrastive Data Collection" published in CVPR 22.**
- **"Did I do that? Blame as a means to identify controlled effects in reinforcement learning" Published in TMLR journal. (M.Sc. Thesis Project)**
- **"Modeling the Impact of Robotics on Infectious Spread Among Healthcare Workers" published in Frontiers in Robotics and AI 8.**
- **"Automatic Concept-based Decision Tree Explanation" published in EDBT 2021.**
- **"ILIME: Local and Global Interpretable Model-Agnostic Explainer of Black-Box Decision" published in ADBIS 2019.**
- **"Interpretability in HealthCare: A Comparative Study of Local Machine Learning Interpretability Techniques" published in CBMS 2019. Extension published in the Journal of Computational Intelligence.**

Work Experience and Internships:

- **Multimodal AI Intern at ELM company. (July 2023-October 2023)**
- **Researcher at Vision-CAIR group in Multimodal Deep Learning, Affective Image Captioning, and Multicultural Modeling. (2022-)**
- **Reviewer at NeurIPS, ICLR, CVPR.**
- **Organizer of 1st Workshop On Emotionally And Culturally Intelligent AI (WECIA) at ICCV 23.**
- **Reinforcement Learning Researcher at University of Tartu (2020-2021).**
- **Teaching Assistant at University of Tartu (2020-2021)**
  - **Courses:** Machine Learning, Deep Learning.
- **Machine Learning Researcher at Data Systems Group at University of Tartu (2019-2020).**
- **Teaching Assistant at Zewail University (2018-2019)**
  - **Courses:** Introduction to CS, Programming fundamentals in C++, Deep Learning, NLP.
- **Blue Cloud Tech Corp internship (2017):** c# training, designing, and implementing a License server.
- **EJADA Software Development Engineering internship (2016):** Database, web, software engineering.

Courses and Training:

- **Introduction to Reinforcement Learning by David Silver.**
- **Coach Academy Advanced Algorithms problem-solving training by coach Abd El Wahab (2018).**
- **Deep Learning Specialization by deeplearning.ai on Coursera(2017-2018).**

Technical Projects:

- **Motivating Reinforcement Learning Agents to Control their Environment: M.Sc. Thesis, Grade A**
  - We tackle the problem of self-motivation in sparse environments. We propose a novel intrinsic reward model architecture derived from Causal literature. Our model motivates the agent to control its environment. Our agent outperforms the competition in multiple sparse environments. It exhibits good exploration behavior and a higher tendency towards controlling objects.
- **Convolutional Neural Networks for Image Segmentation: B.Sc. Thesis, Grade A**
  - We used Mask R-CNN with different backbone networks to trade-off between speed and accuracy. We compared ResNet 50/101, DenseNet 121/169/201, MobileNet 224, and a simple U-Net model. We used the Data Science Bowl 2018 Dataset, which is extremely challenging due to its variety.
- **Academic Projects**
  - **Mouse Neuronal data analysis:** Exploring the neuronal response of mice brains. The blog post can be found Here.
  - **Perfect Snake AI:** We developed a program that completes a snake game to the end. Github link
  - **U.S Mortality analysis:** We used HIVE on HADOOP to make SQL queries on the dataset.
  - **Analyzing the trending Hashtags on Twitter** using spark streaming.
  - **Social Network Android Application**: A prototype social media app using java and android studio.
  - **Electronic payment embedded system**: digital payment system using an Intel Galileo board.
  - **Aeropendulum**: writing PID and state-space control systems to make it stable.
  - **Ball and Plate**: controlling ball position over a plate using a PID system.
  - **Chatbot:** Using a siamese network to create a selective chatbot.
  - **Development of a Q&A game application:** Cross-platform android and IOS app using PhoneGap.
  - **Designing and implementing a License Server:** using C# as part of BCT corp internship.

Skills:

- Deep learning - Machine Learning - NLP - Computer Vision
- Reinforcement Learning
- Programming skills: Python, C++, MatLab
- Languages: Arabic (native), English (IELTS band 7.5)

Grants and Scholarships:

- Fellowship at King Abdullah University of Science and Technology (2022-2026).
- University of Tartu Achievement Stipend for ranking among top students (2019-2021).
- Ministry of Estonian Foreign Affairs (MFA) scholarship for studying at University of Tartu.
- Tuition waiver at University of Tartu.
- Provost's honor roll for all semesters.
- Full scholarship at Zewail City of Science and Technology.