Reem Alsharabi

Reem.Alsharabi@outlook.com | ReemAlsharabi.github.io

Education

Effat University — Jeddah, Saudi Arabia
BSc in Computer Science — *August 2020 – December 2023 (expected)*

- GPA: 3.94 out of 4
- Transcript

papers

Journal Articles (manuscripts under review)

- **R. Alsharabi**, L. Almalki, F. Abed, M. A. Majid, and O. A. Kittaneh, "A Comparative Analysis of Statistical Modelling and Machine Learning Techniques for Predicting the Lifetime of Light Emitting Diodes from Accelerated Life Testing" under review in the IEEE Transactions on Electron Devices journal.

Research Experience

KAUST Academy Intern — July 2023 – August 2023
King Abdullah University of Science and Technology (KAUST) — *Thuwal, Saudi Arabia*

- Explored LLMs' classification abilities, exposing limitations in detecting sociocultural bias in LLM-generated text.
- Trained a specialized bias classifier, achieving 97% accuracy on unseen data, outperforming GPT-3.5 which achieved 53%.
- Collaborated with Dr. Guohao Li at the Image and Video Understanding Lab (IVUL).
- **Paper**

Work Experience

Robotics and AI Intern — May 2023 – July 2023
Smart Methods — *Jeddah, Saudi Arabia*

- Integrated Embedded TensorFlow into a robotic vision system, enabling real-time object detection and recognition capabilities achieving an average precision of 90%.
- Integrated sensors, including cameras, with the robotic arm, preprocessing sensor data for input into the DL models.

Awards & achievements

- Awarded 2nd place among 30 participants in the undergraduate research forum at Effat University (3-minute presentation). Paper: Comparative Analysis of Adversarial Defense Methods in Computer Vision
- Placed on the Dean's List for all semesters.
- Places on Albanawi List of academic excellence.
- Granted a scholarship from Effat University that covers all credit hours required for graduation.

open source contributions

CrypTe
Facebook Research

- Resolved a bug affecting the installation process, ensuring the correct setup and functionality of the package.

Road Sign Prediction
GTSRB Dataset

- Enhanced road sign prediction accuracy from 70% to 92% by addressing label inconsistency issues in horizontal and vertical flipping augmentations, (commonly used as **adversarial defense** methods).

Facial Recognition
Pinterest Dataset

- Improved a facial recognition model by augmenting the dataset, effectively mitigating overfitting issues. The enhancement resulted in a significant performance boost:
- Before: Accuracy = 96%, Validation Accuracy = 75%
- After: Accuracy = 97%, Validation Accuracy = 92%

EVENTS ORGANIZED

- Women in STEM (in collaboration with Google's Women Techmakers community)
- Competitive Programming
- GitHub Version Control Workshop

RELEVANT COURSEWORK

- Machine Learning (A+)
- Information and Cybersecurity (A+)
- Operating Systems (A+)
- Computer Networks (A+)
- Artificial Intelligence (A+)
- Linear Algebra (A+)
- Statistics in Computing (A+)
- Programming Embedded Systems (ongoing)

BLOG POSTS

- The Random Walk Simulation