

# Reem Alsharabi

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## EDUCATION

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### Effat University

*BSc in Computer Science*

Jeddah, Saudi Arabia

August 2020 – December 2023 (*expected*)

- GPA: 3.94 out of 4
- Placed on the Dean's List for all semesters.

## PAPERS

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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

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### KAUST Academy Intern

*King Abdullah University of Science and Technology (KAUST)*

July 2023 – August 2023

*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

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### Robotics and AI Intern

*Smart Methods*

May 2023 – July 2023

*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.

## TEACHING EXPERIENCE

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### Digital Recitation Video Creator

*Effat University*

September 2022 – September 2023

*Jeddah, Saudi Arabia*

- Created and uploaded digital recitation videos on Blackboard, solving practice problems and providing step-by-step explanations to supplement the course material in the following courses:
- Introduction to Algebra
- Statistics in Computing

### Peer Tutor

*Effat University*

September 2021 – June 2022

*Jeddah, Saudi Arabia*

- Provided tutoring and academic support to undergraduate students taking the following courses:
- Principles of Computing
- Advanced Programming
- Statistics in Computing
- Data Structures and Algorithms

## AWARDS & ACHIEVEMENTS

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- 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 Albanawi List of academic excellence.
- Granted a scholarship from Effat University that covers all credit hours required for graduation.

## OPEN SOURCE CONTRIBUTIONS

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### CrypTen

*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: Training Accuracy = 96%, Validation Accuracy = 75%
- After: Training Accuracy = 97%, Validation Accuracy = 92%

## EVENTS ORGANIZED

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

## RELEVANT COURSEWORK

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- Machine Learning (A+)
- Information and Cybersecurity (A+)
- Artificial Intelligence (A+)
- Linear Algebra (A+)
- Statistics in Computing (A+)

## BLOG POSTS

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- The Random Walk Simulation 