Alaqsa Akbar

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EDUCATION

King Fahd University of Petroleum and Minerals (KFUPM), Dhahran, Saudi Arabia   **Sep 2022 – May 2026**
BSc in Computer Engineering (Research Concentration with a focus on AI)   GPA: 3.95/4.00
Georgia Institute of Technology, Atlanta, GA, United States   **Aug 2024 – Jan 2025**
Exchange student in Computer Engineering   GPA: 4.0
Oxford University, Oxford, United Kingdom   **Jul 2024 – Aug 2024**
Summer Program in Advanced Artificial Intelligence   Grade: A

WORK EXPERIENCE

Baker Hughes, Houston, TX, USA – *Computer Engineer Intern*   **Jun 2025 – Aug 2025**
- Assisted in automation projects by documenting and designing test procedures of embedded systems architectures, and developing machine learning models for abnormality detection

UAS2030, Dhahran, Saudi Arabia – *AI & Control Engineer*   **Jan 2025 – Jun 2025**
- Worked on developing AI and control logic for an unarmed aviation system (autonomous drone)

Georgia Tech OLIVES Lab, Atlanta, GA, United States – *Research Assistant*   **Sep 2024 – Dec 2024**
- Worked in Professor Ghassan AlRegib's OLIVES lab on AI research to diagnose optical diseases and detect seismic data
- Managed multiples datasets including terabytes of data: formatting, documenting, and uploading to HuggingFace

SDAIA-KFUPM Joint Research Center for AI, Dhahran, Saudi Arabia — *Researcher*   **Feb 2024 – Aug 2024**
- Worked with Dr. Abduljabbar Siddiqui on his research on Adversarial Patch Attacks on Object Detectors
- Created a data pipeline to generate a dataset in real time throughout the model training phase using OpenCV
- Modified an adversarial attack library (Adversarial Robustness Toolbox) to train a customized adversarial patch attack model robust against adverse weather conditions such as rain by utilizing a project gradient descent (PGD) algorithm

King Fahd University of Petroleum and Minerals, Dhahran, Saudi Arabia — *Course Grader*   **Aug 2023 – Jul 2024**
- Responsible for grading lab assignments for students in KFUPM's Object Oriented Programming course
- Responsible for grading homework assignments for students in KFUPM's Intro to Programming in Python and C course

RESEARCH/PUBLICATIONS

- Allahham, A., & **Akbar, A**. (2025). *Re-Colonization of Architectural Knowledge through AI: an Echo Chamber.* **(In progress)**
- **Akbar, A**., & Siddiqui, A. (2025). *RainPGD: Investigating Rain-Robust Adversarial Patches*. **(In publication process)**
- Alshehri, I.*, Alshehri, A.*, Almalki, A.*, Bamardouf, M.*, & **Akbar, A**.* (2024, August 31). *BreachSeek: a Multi-Agent automated penetration tester.* arXiv.org. https://arxiv.org/abs/2409.03789 **(Preprint)**

* indicates equal contribution

EXTRA-CURRICULARS

Qimam Fellowship, Riyadh, Saudi Arabia – *Fellow*   **Mar 2025 – Present**
- 50 students selected globally out of 18,000+ applicants to participate in a prestigious leadership mentoring program

BCG Jeel Tamooh Fellowship, Riyadh, Saudi Arabia – *Fellow*   **Mar 2025 – Present**
- 150 students selected out of several thousand applicants to be mentored and experience work at BCG

KAUST Academy AI Specialization, Oxford, United Kingdom – *Participant*   **Jan 2024 – Aug 2024**
- Chosen as one of 15 students from over 7000 applicants to attend summer courses at Oxford University
- Took courses on Deep Learning, Computer Vision, Natural Language Processing, and Deep Unsupervised Learning

Imaar, Dammam, Saudi Arabia – *Volunteer*   **Feb 2024**
- Spent a total of 10+ hours volunteering at a government funded apartment for the needy by assisting in its repairs

Saudi Mathematics Olympiad Team, Thuwal, Saudi Arabia – *Member*   **2017 – 2019**
- Took 500+ hours of intensive mathematical training at King Abdullah University of Science and Technology
- Represented Saudi Arabia at the Junior Balkan Mathematical Olympiad in Cyprus where Saudi Arabia got 3rd

RELEVANT TECHNICAL SKILLS/COURSEWORK

Computing Languages and Technologies – Python, Java, C/C++, Verilog, Lua, MATLAB, R, Git, Windows, Linux / Unix
Coursework – Computer Vision, NLP, Deep Unsupervised Learning, Deep Learning, Data Science, Computer Architecture, Data Structures and Algorithms, Object Oriented Programming, Embedded Systems, Computer Networks

ADDITONAL SKILLS AND INTERESTS

Languages: Bilingual in Arabic and English (114 TOEFL)
Interests: Football; Badminton; Video Games