Name: Amal Saif.

Bio: is a Ph.D. candidate in computer science at Princess Sumaya University for Technology (PSUT). She graduated from PSUT with a B.Sc. in Telecommunications Engineering and an M.Sc. in Information Systems Security and Digital Criminology. She has received a grant from the Sharing Knowledge Foundation to conduct research in the laboratories of the European Organization for Nuclear Research, known as CERN, for a year. Her current research interests are in artificial intelligence and image processing and their applications, especially in particle physics, security, and the medical field.

Published Papers/ Book Chapters:

A. Saif, A. Altarazi, A. Al-Badarneh, M. Abdel-Rahman, "**HPG-tree: An Enhanced B$^+$-tree for Spatial Indexing**" *IEEE Access*, 2025.

E. Alnagi, **A. Saif**, and A. Ahmad, "**A CNN-Based Model for Classifying Arabic Calligraphy Extracted from Images**," in *Future of Information and Communication Conference*, Cham: Springer Nature Switzerland, 2025, pp. 376-386.

A. Saif, E. Alnagi, and A. Ahmad, "**Texture-Based Classification of Geo-Fossils,**" in *Information Integration and Web Intelligence*, Lecture Notes in Computer Science, vol. 15343, Springer, 2024.

A. Saif, R. Ibrahim, S. Almajali, and H. B. Salameh, "**Data-Driven Unified Channel Modeling of WiFi and LiFi Using Conditional GAN,**" in *International Conference on Intelligent Computing, Communication, Networking and Services (ICCNS)*, Dubrovnik, Croatia, 2024, pp. 215-219.

A. Saif, R. Ghnemat, and Q. Abu Al-Haija, "**Siamese Network Optimization Using Genetic Algorithm for Brain Diseases,**" *The Institution of Engineering and Technology - Image Processing*, 2024.

A. Saif and Q. Abu Al-Haija, "**Artificial Intelligence (AI)-Powered Internet of Things (IoT): Smartening Up IoT,**" in *Future Communication Systems Using Artificial Intelligence, Internet of Things and Data Science*, CRC Press, 2024, pp. 18-29.

A. Saif and Q. Abu Al-Haija, "**AI in the Gaming Industry**," in *Future Tech Startups and Innovation in the Age of AI*, CRC Press, 2024, pp. 109-119.

A. Saif, H. Al-Kilani, M. Qasaimeh, and A. Al-Refai, "**Analysis of Android Applications Permissions,**" in *International Conference on Data Science, E-Learning, and Information Systems*, Association for Computing Machinery, New York, NY, USA, 2021, pp. 243-249.

M. Al-Fawa'reh, **A. Saif**, M. T. Jafar, and A. Elhassan, "**Malware Detection by Eating a Whole APK**," in *International Conference for Internet Technology and Secured Transactions (ICITST)*, 2020, pp. 1-7.

Accepted but not published:
A. Saif, O. Alhuniti, A. Abu Taleb, A. Odeh, and B. Mahafzah, "**Diamond hypercube interconnection network: Topological structure and properties**," *Journal of Supercomputing*, 2025.

E. Alnagi, **A. Saif**, and A. Ahmad, "**A Comparative Study to Evaluate the Performance of Selective Models in Software Vulnerability Detection**," In the 4th International Conference on Advanced Enterprise Information Systems, 2025.

Submitted Papers:

Paper Title	Authors	Venue
A Novel Medical Images Random Cryptosystem: Algorithm and Mode of Operation	Eman Alnagi, **Amal Saif**, Ashraf Ahmad	Journal
An Explained Machine Learning Model for Analyzing Electric Vehicle Cyber Attacks	**Amal Saif**, Eman Alnagi, Ashraf Ahmad	Journal
Detecting Emotions based on Functional Magnetic Resonance Imaging	**Amal Saif**, Eman Alnagi, Ashraf Ahmad	Journal
Automated Assessment and Detection of Third Molar and Inferior Alveolar Nerve Relations using UNet and Transfer Learning Models	Ahmad Klaib, **Amal Saif,** Tasneem AlHosanie, et. al	Journal
Improving IoT Security: The Impact of Dimensionality and Size Reduction on Intrusion Detection Performance	Remah Younisse, **Amal Saif**, Nailah Al-Madi, Sufyan Almajali, Basel Mahafzah	Journal

Research Interests:

- Artificial Intelligence.
- Image Processing.
- Medical Data.
- Security.
- Quantum Machine Learning.
- Particle Physics.

Academic Services and Other Activities

- Technical and Organizing Committee Member, **ICTCS'25.**
- Program Committee Member, **ICICS 2024**.
- Volunteering as a Technical Shifter at the CMS experiment (2022/CERN).
- Supervised a student in the Summer Program at CERN (2022).
- Mentor at GSOC-ML4Sci.

Talks

- AI and its applications, **"AI around us"** Workshop, PSUT, May 10-11,2024
- AI applications at CERN, **CERN & SESAME INFO Days: "Discover the Future of Science,"** University of Bahrain, February 14-15, 2023.

Research Group:

Security and Digital Image Processing Group (Prof. Ashraf Ahmad, Eman Alnagi, and Amal Saif).

Important Links:

LinkedIn: https://www.linkedin.com/in/amal-saif-b3285718b/

Google Scholar: https://scholar.google.com/citations?user=FzERpsUAAAAJ&hl=en&authuser=2