

Fatma El-Zahraa Gamal Shams El-Deen

PH.D. CANDIDATE & AI RESEARCHER

CONTACT

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📍 Al-Omarab Region, near Al-Sadakaa Al-Gadeda, Al-Gozaira Village, 81511, Aswan, Egypt

PLATFORMS

📖 ResearchGate

FREELANCE RESEARCH

M Mostaq (مستقل)

ACADEMIC PROFILE

Ph.D. Status: Candidate (since 2022)

M.Sc. Confirmed: 2021

Born: 1994

Research Vision

Dedicated Ph.D. Researcher and Engineer seeking an AI Researcher or Machine Learning Engineer position to contribute to innovative R&D projects and push the boundaries of intelligent systems.

Academic Researcher and Ph.D. Candidate specializing in Machine Learning, Privacy-Preserving AI, and Federated Learning. Experienced in developing algorithmic solutions and conducting technical research at the university level. Passionate about Deep Learning and its applications in real-world automation.

Academic & Research Experience

2018 – Present

Assistant Teacher & Researcher

Faculty Of Engineering, Aswan University

Aswan City, Egypt

- Conducting research in Computer and Systems Engineering, focusing on intelligent algorithm design.
- Teaching advanced lab courses in Machine Learning, Pattern Recognition, and Embedded Systems.
- Supervising undergraduate graduation projects involving Computer Vision and AI-driven automation.
- Assisting in the development of departmental research roadmaps and curriculum updates.

Research Publications

2021

A Parallel Implementation of The Rotational Compensator Phase Unwrapping Algorithm

Fatma Gamal, Mostafa Soliman, and Samia Heshmat

NEURAL PARALLEL AND SCIENTIFIC COMPUTATIONS

VOL. 29, NO. 1, PP. 21-38

Technical Competencies

AI & MACHINE LEARNING

Python (PyTorch, TensorFlow, Scikit-learn)

Federated Learning (FL) Frameworks

Privacy-Preserving Machine Learning (PPML)

Computer Vision (OpenCV, Image Processing)

Deep Learning & Neural Networks

Statistical Data Analysis & Modeling

Technical Writing & LaTeX

METHODOLOGY & LEADERSHIP

Analytical Thinking

Academic Leadership

Scientific Research

Problem Solving

Public Speaking

Education & Advanced Degrees

2022 – Present

Doctor of Philosophy (Ph.D.) Candidate in Electrical Engineering

Faculty Of Engineering, Aswan University

- Specialization: Computer and Systems Engineering
- Research Focus: Federated Learning (FL) and Privacy Preserving Machine Learning (PPML).
- Developing decentralized training frameworks to ensure data privacy across distributed systems.

2018 – 2021

Master Of Science (M.Sc.) In Electrical Engineering

Faculty Of Engineering, Aswan University

- Specialization: Computer and Systems Engineering
- Focus: Advanced Research Methodology, Statistical Signal Processing, and Intelligent Systems.

Sep. 2011 – Jun. 2016

Bachelor Of Electric Engineering (Computer & Systems)

Faculty Of Engineering, Aswan University

- Cumulative Grade: Very Good
- Graduation Project: Egyptian License Plate Recognition using Computer Vision.
- Graduation Project Grade: Distinct (Highlighting early expertise in Image Processing).

Oct. 2016 – Jun. 2017

9 Month Professional Diploma (Web Development & BI)

Information Technology Institute (ITI)

- Integrated System Development with Business Intelligence focus.