Sarah Osama

New Minia, Minia, Egypt

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EDUCATION AND QUALIFICATION

Ph.D. in Computer Science, Thesis Project

Research Title: Diseases Prediction Based on Gene Selection from Microarray Gene Expression Using Artificial Intelligence

Faculty of Computers and Information 2021-2023
Department of Computer Science
Minia University, Egypt

Postgraduate student,

Faculty of Computers and Information 2019-2020
Department of Computer Science
Minia University, Egypt

MSc. in Computer Science, Thesis Project

Research Title: Kernel-based Swarm Optimization for Renewable Energy Application

Faculty of Computers and Information 2016-2018
Department of Computer Science
Cairo University, Egypt

Postgraduate student (Premaster),

Faculty of Computers and Information 2014-2015
Department of Computer Science
Cairo University, Egypt

BSc. in Computer Science 2010- 2014
Graduation Grade: Excellent distinction with honor degree, ranked First of the class (92.04%).
Graduation project: Mirror database engine reflection
Faculty of Computers and Information
Department of Computer Science
Minia University, Egypt

OCCUPATION DATA

Lecturer 2023-present

Faculty of Computers and Information
Department of Computer Science
Minia University, Egypt

Researcher 2023-present

Faculty of Computers and Information
Department of Computer Science
Minia University, Egypt

Lecturer Assistant 2018-2023

Faculty of Computers and Information
Department of Computer Science
Minia University, Egypt

Research Assistant 2018-2023

Faculty of Computers and Information
Department of Computer Science
Minia University, Egypt

Teaching Assistant 2014-2018

Faculty of Computers and Information
Department of Computer Science
Minia University, Egypt

Research Assistant 2014-2018

Faculty of Computers and Information
Department of Computer Science
Cairo University, Egypt

TEACHING EXPERIENCE

Undergraduate Courses

Neural Networks and Learning Machines Winter (2023)
Lecture Instructor, Minia University
Around 6 students

Theory of Computations Winter (2023)
Lecture Instructor, Minia University
Around 183 students

Object Oriented Programming with C# Summer course (2018,2019)
Lab Instructor, Minia University
Around 150 students

Assembly Language Fall (2014, 2015, 2016, 2017 and 2018)
Lab Instructor, Minia University
Around 75 students

Neural Networks Winter (2015, 2016, 2017 and 2019)
Lab Instructor, Minia University
Around 50 students

Fundamental of Information Technology Fall (2017, 2018)
Lab Instructor, Minia University
Around 50 students

Data Structures Fall (2015)
Lab Instructor, Minia University
Around 50 students

EDUCATION COURSES

Advanced Mathematics and Algorithms Fall (2014)
Cairo University
Formal Methods and Theory of Computation Fall (2014)
Cairo University
Cryptography Fall (2014)
Cairo University
Advanced Artificial Intelligence Winter (2015)
Cairo University
Research Method and Skills Winter (2015)
Cairo University
Advanced Natural Language Processing Winter (2015)
Cairo University
Image Processing Fall (2013)
Minia University
Artificial Intelligence Winter (2013)
Minia University
Object Oriented Programing Fall (2011)
Minia University

WORKSHOPS

Scientific research ethics Winter (2020)
Minia University

.Net Full Stack track Fall(2019)
Information Technology Institute,

Statistical analysis using SPSS Winter(2019)
Information Technology Center, Minia University

References management with EndNote Winter(2019)
Information Technology Center, Minia University

Effective Communication Fall (2017)
Minia University

Effective Presentation Fall (2017)
Minia University

Teaching Techniques Fall (2017)
Minia University

PUBLICATIONS

Thesis

- **Sarah Osama**, 2023," Diseases Prediction Based on Gene Selection from Microarray Gene Expression Using Artificial Intelligence", Ph.D. Thesis, Minia University
- **Sarah Osama**, 2018," Kernel-Based Swarm Optimization for Renewable Energy Application", MSc Thesis, Cairo University

Journal Papers

- **Osama, S.,** Ali, A.A. and Shaban, H., **2024**. Gene selection based on recursive spider wasp optimizer guided by marine predators algorithm. ***Neural Computing and Applications***, *36*(28), pp.17327-17344.
- **Osama, S.**, Ali, M., Ali, A.A. and Shaban, H., **2023**. Gene selection and tumor identification based on a hybrid of the multi-filter embedded recursive mountain gazelle algorithm. ***Computers in Biology and Medicine***, *167*, p.107674.
- **Osama, S.,** Shaban, H. and Ali, A.A., **2023**. Gene reduction and machine learning algorithms for cancer classification based on microarray gene expression data: A comprehensive review. ***Expert Systems with Applications***, *213*, p.118946.
- **Osama, S.,** Ali, A.A. and Shaban, H., **2023**. A hybrid of Information gain and a Coati Optimization Algorithm for gene selection in microarray gene expression data classification. ***Kafrelsheikh Journal of Information Sciences***, *4*(1), pp.1-16.

Conference Papers

- **Osama, S.,** Houssein, E.H., Hassanien, A.E. and Fahmy, A.A., **2017, October.** Forecast of wind speed based on whale optimization algorithm. **In *Proceedings of the 1st International Conference on Internet of Things and Machine Learning*** (pp. 1-9).
- **Osama, S.,** Darwish, A., Houssein, E.H., Hassanien, A.E., Fahmy, A.A. and Mahrous, A., **2017, December**. Long-term wind speed prediction based on optimized support vector regression. **In *2017 eighth international conference on intelligent computing and information systems (ICICIS)*** (pp. 191-196). IEEE.

Book Chapter

- **Osama, S.,** Darwish, A., Houssein, E.H., Hassanien, A.E., Fahmy, A.A. and Mahrous, A., **2017, December.** Long-term wind speed prediction based on optimized support vector regression. **In *2017 eighth international conference on intelligent computing and information systems (ICICIS)*** (pp. 191-196). IEEE.

TECHNICAL SKILLS

- **Programming Language**
  - Python, C++, C#. Net and Assembly
- **Productivity suites**:
  - Microsoft Office and MATLAB
- **Database management system**
  - Microsoft SQL Server and Microsoft Access

- **Concepts and Modeling**
  - Object Oriented Programming
  - Data Structure.
- **Latex**

FIELDS OF INTEREST (RESEARCH)

- Machine Learning
- Deep Learning
- Bioinformatics
- Optimization
- Artificial Neural Network
- Clinical and Medical Computing

LANGUAGES

- Arabic (Native)
- English