

## Curriculum Vitae

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**Certification:** Ms.c. in Computer Science

**General specialty:** Computer Science

**Specialty:** Computer Science

**Scientific Title:** Assistant Lecturer

**Date of Obtaining:** 19/10/2021

**Affiliation:** University of Diyala - Physical Education and Sports Sciences college ( Al-Muradiya. Baquba city, Diyala Province, Iraq. Pin code – 32001)

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### Other Information

**Mother Language:** Arabic - **Foreign Language:** English

### Qualification and degrees:

Saja Salim Mohammed received a B.Sc in Computer Science from the University of Technology(2006), and M.Sc degree from the University of Diyala(2021). She has published two scientific papers at international conferences. He is working as Assistant Lecturer at the University of Diyala.

### Academic and scientific experience

**Programming Language:** visual basic, C language, Pascal, python

**Database:** Access, Visual Fox pro.

**Others:** Math lap, AutoCAD.

### **Subjects of Teaching**

Advance Computer Technology  
Computer Graphics  
Artificial intelligence  
Neural Network  
Network  
Office application  
Computer skills  
Datamining  
Image processing

### **Responsibility**

- Staff member and Lecturer in College of Physical Education and Sports Sciences / Diyala University.

### **Conferences**

- 2nd International Scientific Conference of Engineering Sciences (ISCES 2020) IOP Conf. Series: Materials Science and Engineering, University of Diyala, College of Engineering.
- 1st International Conference for Pure Science (ICPS-2021) University of Diyala, College of Sciences, in a partnership with Western Michigan University.

### **Publication List**

### **Professional Memberships**

Member of University Lecturers Association

### **Acknowledgments:**

- Nine Gratitude & Appreciation letter from the Dean of College, (2008-2020).

- Five Gratitude& Appreciation letter from the President of University of Diyala, (2008- 2020).
- Three Gratitude& Appreciation letter from the Minister of Higher Education and Scientific Research (2010-2021).

**Master's thesis Title:**

***Skin Disease Classification Approach Based on  
Metaheuristic Optimization***

Supervisor

***Asst. Prof. Dr. Jamal Mustafa Al-Tuwaijari***

2021

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**Abstract:** Specialist doctors face great difficulties in diagnosing certain types of skin diseases due to the high similarity among these diseases such as seborrheic dermatitis, psoriasis, lichen planus, chronic dermatitis, pityriasis rosea, and pityriasis rubra. Predicting skin diseases became increasingly important in the general health of society, so automated, effective and accurate diagnosis systems of skin diseases are very important for biomedical analysis. Automated diagnostic technology proposes Feature Selection (FS) and classification methods to improve the efficiency of current diagnostic systems where metaheuristic algorithms were used in some of these systems.

This thesis presents Skin Disease Classification Approach based on a new FS technique by utilizing three metaheuristic algorithms: Sine Cosine Algorithm (SCA), Particle Swarm Optimization (PSO), and Antlion Optimization Algorithm (ALO). Thereafter, the original algorithms domain were converted to a binary version towards applying

the classification to determine the best subset of features based on the wrapper model. Then, the mutation operator was applied as an internal function to preserve diversity and strengthen the SCA's exploration capabilities, and the new outcome of this mechanism is called Enhanced Sine Cosine Algorithm (ESCA). At this point, the system produces four results from the above four approaches.

The output of the used approaches is: ALO achieved rating accuracy of (94%) with the ratio of selected features (0.86) while PSO achieved rating accuracy of (89%) with the ratio of selected features (0.81) as for SCA achieved accuracy (95%) with the ratio of selected features (0.70) and finally ESCA achieved excellent diagnostic accuracy of (98%) with the ratio of selected features (0.62).

