

# Fadhl Alakwaa

DATA SCIENTIST ·

Ann Arbor, Michigan

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🏠 <https://medicine.umich.edu/dept/dcmb/fadhl-alakwaa-phd>

📱 FADHLYemen

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[fadhl-alakwaa](#)

*“Background in Biomedical Engineering”*

## Summary

Expert Data Scientist with background in Engineering and bioinformatics. Extensive experience in data analysis and integration using statistical methods, deep learning and machine learning algorithms. Expert on extracting useful information from data. Extremely passionate about programming, deep learning, and data visualization.

## Education

### Cairo University

B.Sc IN BIOMEDICAL ENGINEERING

• Relevant courses: Advanced Mathematical Physics, Programming, Abstract Algebra, Differential Equations

*Cairo, Egypt*

*Aug. 2003*

### Cairo University

MSC. IN BIOMEDICAL ENGINEERING

• Relevant courses: Computational Science, advanced mathematics, Quantum Mechanics, Mathematical Methods of Physics

*Cairo, Egypt*

*Aug. 2006*

### Cairo University

PHD. IN BIOMEDICAL ENGINEERING

• Relevant courses: R for data science

*Cairo, Egypt*

*Aug. 2009*

## Experience

### University of Michigan

RESEARCH FELLOW

Developed an open source R package for data classification and feature selection. [Github Paper](#)

*Ann Arbor, MI*

*Current*

### University of Hawaii

RESEARCH FELLOW

Lead Data Scientist and Deep Learning developer for features extraction and classification. Used Deep Learning techniques such as TensorFlow, H2O, Jupyter. [Deep learning paper](#)

*Honolulu, HI*

*2016-2018*

### Henry Ford Health System

DATA ANALYST

Developed an algorithm to find the association between fMRI images and genomics data using Canonical Correlation Analysis.

*Detroit, MI*

*2016*

### US Department of State

AI Advisor

Advised and helped developed a database of biomedical devices for calibration and maintenance based on FDA regulation and international standards.

*Yemen*

*2015*

### University of Science and Technology

ASSISTANT PROFESSOR

Designed the curriculum of various Data Science/ML courses. Evaluated various IoT platforms. Investigated technologies such as TensorFlow and OpenCV to run ML algorithms in IoT devices.

*Yemen*

*2009-2015*

## Open Source Projects Developed

### LILIKOI

[liliko](#) Lilikoi is a novel tool for personalized pathway analysis of metabolomics data.

### BCT

[BCT](#) BCT is Matlab toolbox which is designed to compare between biclustering algorithms.

## Areas of Interest

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Data analysis and visualization, Deep Learning/Neural Networks, Artificial Intelligence, Optimization/Heuristics, Mathematical Modelling, Agent-based Simulation, Network Analysis, Functional Programming

## Languages

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English C1, Arabic Native

## Programming Tools

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Programming Languages Python: 1+ years, Matlab: 6+ years, Mathematica : 3+ years, R: 4+ years

## Tools/Frameworks

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Data Science: [Tensorflow](#) (python), [Scikit Learn](#) (python), [Pandas](#), [Numpy](#), [NetworkX](#) (python), [Spark](#) (scala/python)

## Community

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Organization/Groups

- Ad Hoc Reviewer of [International Conference of the System Dynamics Society](#)
- Program evaluator of [Accreditation Board for Engineering and Technology](#)
- Country coordinator [International Network for the Availability of Scientific Publications \(INASP\)](#)

## Talks/Conferences

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- R package for personalized pathway-based classification modeling using metabolomics data at [International Conference on Intelligent Biology and Medicine-2018](#)
- Deep Learning for metabolomics data at [7th Annual Translational Bioinformatics Conference-2017](#)

## Personal Projects

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- [Hawaii Machine Learning Meetup Challenge](#)