HAMADA S. BADR

Senior Applied Scientist

Sales, Marketing & Global Services (SMGS) Ops

Amazon Web Services (AWS)

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SUMMARY

Today, there are many skilled and talented scientists applying their abilities to solve challenging problems in their field and contributing to the scientific literature. It is rare, however, to find interdisciplinary scientists who dynamically combine multiple disciplines, creative ideas, and innovative approaches to solve complex real-world problems using machine learning and numerical simulations. I am an applied scientist with broad and in-depth skills and over two decades of experience in statistical analysis, numerical modeling of physical processes, data visualization, and software engineering as well as project management and leadership. I am a language-agnostic software developer who can easily and quickly switch between different platforms and master new solutions. I am trained first in aerospace engineering and earth sciences, and I have developed my skills in software engineering, mathematics, statistics, machine learning, and physics to address grand challenges in aerodynamics, hydroclimate, infectious diseases, global health, and business intelligence.

EDUCATION

2011 - 2016
Baltimore, Maryland, United States

Doctor of Philosophy - PhD, Earth Sciences
The Johns Hopkins University (JHU)

2011 - 2013
Baltimore, Maryland, United States

Master of Arts - MA, Earth Sciences
The Johns Hopkins University (JHU)

2003 - 2011
Giza, Egypt

Master of Science - MS, Aerospace Engineering
Cairo University (CU)

1997 - 2003
Giza, Egypt

Bachelor of Science - BS, Aerospace Engineering
Cairo University (CU)

EXPERIENCE

09/2022 - 06/2024
Herndon, Virginia, United States

Senior Applied Scientist
Amazon Web Services (AWS)

Sales, Marketing & Global Services (SMGS) Ops

- Uncover stages, inflection points, dwell times, insights, and drivers of end-to-end customer journeys, using machine learning (ML) and artificial intelligence (AI).

06/2020 - 09/2022
Baltimore, Maryland, United States

Associate Research Scientist
The Johns Hopkins University (JHU)

Department of Civil and Systems Engineering (CaSE)

- Develop an environmentally informed risk monitoring and early warning system for potential reemergence of COVID-19.

05/2016 - 06/2020
Baltimore, Maryland, United States

Assistant Research Scientist
The Johns Hopkins University (JHU)

Department of Earth and Planetary Sciences (EPS)

- Incorporate machine learning (ML), artificial intelligence (AI), and high-performance computing (HPC) in interdisciplinary scientific research.

09/2005 - 08/2018
Baltimore, Maryland, United States

Group Chief Executive | Assistant Research Scientist
National Authority for Remote Sensing & Space Sciences (NARSS)

Data Reception, Analysis & Receiving Station Affairs

- Improve numerical weather modeling and prediction using remote sensing, statistical modeling, data assimilation, and ensemble forecasting.