



# HAMADA S. BADR


Senior Applied Scientist

Customer Service Forecasting Science

Amazon

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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 - Present**

Seattle, Washington, United States

- **Senior Applied Scientist**  
**Amazon, Amazon Web Services (AWS)**  
Customer Service Forecasting Science
  - Develop automated and scalable scientific framework for contact demand forecasting.AWS Sales, Marketing & Global Services Operations
  - Uncover stages, inflection points, dwell times, insights, and drivers of end-to-end customer journeys.

**08/2011 - 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.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**

Cairo, Egypt

- **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.