

# CV

2024-07-13

## Table of contents

Education . . . . .	1
Work experience . . . . .	1
Skills . . . . .	2
Publications . . . . .	2
Talks and Presentations . . . . .	3
Teaching . . . . .	3
Awards and Affiliations . . . . .	3
Awards . . . . .	3
Affiliations . . . . .	4

## Education

- Ph.D in Mathematics, Florida State University; Florida, USA 2026 (expected)
- M.S. in Mathematics, Youngstown State University; Ohio, USA 2020
- M.S. in Applied Mathematics, University of Dhaka; Dhaka, Bangladesh 2016
- B.S. in Mathematics, University of Dhaka; Dhaka, Bangladesh 2014

## Work experience

- Graduate Teaching Assistant (Fall 2021- To Date)
  - Florida State University
  - Duties includes: Teaching, Proctoring, and Grading
  - Supervisor: Penelope Kirby, Ph.D
- Graduate Teaching Assistant (Fall 2018 - Spring 2020)
  - Youngstown State University

- Duties included: Teaching, Proctoring, and Grading
  - Supervisor: G. Jay Kerns, Ph.D
- Assistant Vice President (September 2017 - July 2018)
  - Delta Life Insurance Company Ltd. Dhaka, Bangladesh
  - Duties included: Calculated all types of claims (death, surrender, and maturity) using excel spreadsheets.
  - Processed approximately 500 claims each week and submitted corresponding statistical reports to the higher authority.
  - Worked in a team to develop a new short-term endowment assurance product which played an important role to increase the company's new business.
  - Refurbished a without risk endowment product which was out of the sale. Priced insurance premiums based on different risk factors for bigger clients which impacted our life fund significantly.
  - Calculated reserves for group endowment, term and premium back policies which was a vital part of the final valuation report.
  - Liaised directly with the consulting actuary and provided all sorts of technical and documental supports during actuarial valuation
  - Supervisor: Md. Salahuddin Soud, VP

## **Skills**

- Language
  - Bengali: Native
  - English: Fluent
- Computer Literacy
  - Programming Languages: Python, FORTRAN, Julia, R, MATLAB, Mathematica
  - Software Development Tools: Git, GitHub, PyPi
- Musical Instrument: Amateur/Novice Bamboo flute player

## **Publications**

- GJR-GARCH Volatility Modeling under NIG and ANN for Predicting Top Cryptocurrencies  
Mostafa, F; Saha, P; Islam, Mohammad R.; Nguyen, N. (2020) "Comparison of financial models for stock price prediction." *Journal of Risk and Financial Management*.
- Comparison of Financial Models for Stock Price Prediction  
Islam, Mohammad R.; Nguyen, N. (2020) "Comparison of financial models for stock price prediction." *Journal of Risk and Financial Management*.

## **Talks and Presentations**

- The Heavy-Tail Phenomenon in Decentralized Stochastic Gradient Descent  
November 20, 2023  
Presentation at James J Love Building, Florida State University, Tallahassee, Florida
- Decentralized Stochastic Gradient Langevin Dynamics and Hamiltonian Monte Carlo  
October 05, 2023  
Presentation at James J Love Building, Florida State University, Tallahassee, Florida
- Sensitivity analysis for Monte Carlo and Quasi Monte Carlo option pricing  
April 28, 2020  
Presentation at Cafaro Hall, Youngstown State University, Youngstown, Ohio

## **Teaching**

- Spring 2024: MAP4170 Introduction to Actuarial Mathematics
- Fall 2023: MAP4170 Introduction to Actuarial Mathematics
- Spring 2023: MAC1140 PreCalculus Algebra
- Fall 2022: MAC2311 Calculus and Analytic Geometry I
- Fall 2021 and Spring 2022: PreCalculus and Algebra
- Fall 2018 to Spring 2020: College Algebra, Trigonometry

## **Awards and Affiliations**

### **Awards**

- Bettye Anne Busbee Case Graduate Fellowship & Doctoral Mentorship Recognition 2024
- Outstanding Graduate Student in Statistics Award for the 2019-2020 academic year, Youngstown State University.
- Graduate College Premiere Scholarship, Youngstown State University.
- MetLife Bangladesh Actuarial Study Program 2015

**Affiliations**

- Bangladesh Mathematical Society: Life Member
- Society of Actuaries, SOA: Student Member
- American Mathematical Society, AMS
- Society for Industrial and Applied Mathematics