CV

2024-07-13

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## 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 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](https://www.bdmathsociety.org/)
* [Society of Actuaries, SOA: Student Member](https://www.soa.org)
* [American Mathematical Society, AMS](https://www.ams.org)
* [Society for Industrial and Applied Mathematics](https://www.siam.org/)