# KOMAL BATOOL

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## EDUCATION

| Name of Degree | University/ Institution | Passing Year | CGPA |
|---|---|---|---|
| PhD (Mathematics) | Department of Mathematics, NED University of Engineering & Technology | In Progress | -- |
| MS in Data Engineering & Information Management | Department of Computer & Information Systems (CIS), NED University of Engineering & Technology | 2020 | 3.26 |
| BS in Computational Finance | Department of Mathematics, NED University of Engineering & Technology | 2017 | 3.77 **(2nd Position)** |

## ACADEMIC POSITIONS

- **Lecturer** (July 2022 to date), Department of Mathematics, NED University of Engineering & Technology.
- **Co-operative Teacher** (October 2019 to June 2022), Department of Mathematics, NED University of Engineering & Technology.
- **Research Assistant** (May 2019- September 2019), National Centre of Big Data & Cloud Computing (NCBC), NED University of Engineering & Technology.

## TEACHING EXPERIENCE

1) Computer Applications in Finance – BS (Computational Finance), NEDUET
2) Programming Languages – BS (Computational Finance), NEDUET
3) Introduction to Probability & Statistics – BS (Computational Finance), NEDUET
4) Introduction to Mathematical Finance – BS (Computational Finance), NEDUET
5) Financial Derivatives – BS (Computational Finance), NEDUET
6) Discrete-Time Finance – BS (Computational Finance), NEDUET
7) Stochastic Models in Finance– BS (Computational Finance), NEDUET
8) Financial Engineering – BS (Computational Finance), NEDUET
9) Continuous-Time Finance – BS (Computational Finance), NEDUET

## RESEARCH PUBLICATION

- K. Batool, M. F. Ahmed, and M. A. Ismail, “A Hybrid Model of Machine Learning Model and Econometrics’ Model to Predict Volatility of KSE-100 Index,” Reviews of Management Sciences, vol. 4, no. 1, pp. 225–239, Jun. 2022, doi: 10.53909/rms.04.01.0125.

## PROJECT SUPERVISION

- Impact of asset-liability management on liquidity risk of listed banks.
- Modelling political instability index and its projection on PSX.
- Market modelling and analysis of ceramic tile industry in Karachi.
- Optimizing returns of hybrid funds using ANN.
- Prediction of house prices using certain factors.
- Risk based approach to evaluate performance of KMI 30 index and KSE-30 index.
- Analysis of optimal portfolio risk and return under different constraints.
- Customer Segmentation Using machine learning models.
- Prediction, comparison and visualization of premium pricing using machine learning methods.

## UNIVERSITY SERVICES

- Class Advisor, Third Year BS- Computational Finance, (October 2019 to date).
- LMS coordinator, Third Year BS- Computational Finance, (October 2020 to February 2021).