KOMAL BATOOL

PERSONAL INFOMATION

Role Title: Lecturer | PhD Scholar

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Research Gate: https://www.researchgate.net/profile/Komal-Batool-5?ev=hdr_xprf

EDUCATION

Name of Degree	University/ Institution	Passing Year	CGPA
PhD (Mathematics)	Department of Mathematics, NED University of Engineering & Technology	In Progress	3.89
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

- Computer Applications in Finance – BS (Computational Finance), NEDUET
- Programming Languages – BS (Computational Finance), NEDUET
- Introduction to Probability & Statistics – BS (Computational Finance), NEDUET
- Introduction to Mathematical Finance – BS (Computational Finance), NEDUET
- Financial Derivatives – BS (Computational Finance), NEDUET
- Discrete-Time Finance – BS (Computational Finance), NEDUET
- Stochastic Models in Finance– BS (Computational Finance), NEDUET
- Financial Engineering – BS (Computational Finance), NEDUET
- Continuous-Time Finance – BS (Computational Finance), NEDUET

RESEARCH PUBLICATION

- Batool, K., Ahmed, M. F., & Ismail, M. A. (2022). A hybrid model of machine learning model and econometrics' model to predict volatility of KSE-100 Index. *Reviews of Management Sciences*, *4*(1), 225-239. Doi: https://doi.org/10.53909/rms.04.01.0125
- Batool, K., Fatima, U., & Ahmed, M. F. (2025). Trend Prediction of DJIA index based on News Extraction from Yahoo Finance. *International Journal of Computer Applications*, *975*, 8887. Doi: 10.5120/ijca2025924379

Under Review Article:

- Komal Batool, Mirza Mahmood Baig, Ubaida Fatima, "Meta-Learning for Financial Market Prediction: An Efficient Approach to Forecasting with Reduced Computation", International Journal of Advanced & Applied Sciences (IJAAS) **[impact factor: 0.4]**
- Batool, K., & Fatima, U. (2025). Multi-Modal Data Driven Algorithm for Efficient Trade Market Prediction, *PREPRINT (Version 1) available at Research Square.* Doi: https://doi.org/10.21203/rs.3.rs-6509598/v1

FYDP 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.
- Forecasting of Risk & return of top trading industries listed in PSX using stochastic models.
- Customer Segmentation Using machine learning models.
- Prediction, comparison and visualization of premium pricing using machine learning methods.
- Comparison of Time Series Forecasting Models-ARIMA & LSTM

UNIVERSITY SERVICES

- Class Advisor, Third Year BS- Computational Finance, (October 2019 to November 2023).
- LMS coordinator, Third Year BS- Computational Finance, (October 2020 to February 2021).