



# Noor Nayer

## Curriculum Vitae

### Objective

To obtain a position utilizing my extensive knowledge and experience in teaching and research. Moreover, where I can share my expertise in the field of education.

### Education

2021-23 **MS (Information Security)**, COMSATS University Islamabad, Islamabad 44000, Pakistan, CGPA 3.49/4.00.

2015-19 **BS (Information Technology)**, University of Gujrat, Gujrat, Pakistan, CGPA 3.02/4.00.

### MS Thesis

Title *Fraud Detection in Bitcoin Transactions through Ensemble Stacking Model.*

Abstract *Bitcoin is known for its potential for unlawful activities like money laundering and dark web transactions. Blockchain technology prevents illegal transactions but cannot detect them. Machine Learning (ML) is a promising approach for anomaly detection, as it can identify patterns and features in transactions. Researchers are developing an efficient fraud and security threat detection model using ensemble learning. The proposed model uses ADASYNTL balancing technique, random search for hyperparameter tuning, and a stacking model combining Decision Tree, Naive Bayes, K-Nearest Neighbors, and Random Forest. The model achieves high performance, with a 97% F1-score, precision of 96%, recall of 98%, accuracy of 97%, AUC-ROC of 99%, and FPR of 0.03.*

Keywords *Bitcoin Transaction, Hyperparameter Tuning, Machine Learning, Ransomware Attack, Stacking Model, Random Forest, Decision Tree, Naive Bayes, K-Nearest Neighbors*

Supervisor [Prof. Dr. Nadeem Javaid](#)

### BS Final Year Project

Title *Code Smell Detector and their Refactoring Solution.*

Abstract *Code-Smells refer to design situations that may adversely affect the maintenance of software. They make a system difficult to change, which may in turn introduce bugs. Code- smells are detected, in general, using quality metrics that formalize some symptoms based on detection rules. We design a project that minimize extra comments, that minimize extra if statement using logical operators.*

Keywords *Code Smell, If Statement, Extra Comments, Logical Operators*

Supervisor [Mr. Ikram ul Haq](#)

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## Publications

### Journals

- [1] Noor Nayyer, Nadeem Javaid, Mariam Akbar, Abdulaziz Aldegheishem, Nabil Alrajeh and Safdar Hussain Bouk, "A New Framework for Fraud Detection in Bitcoin Transactions through Ensemble Stacking Model in Smart Cities." IEEE Access (2023). Download from [IEEE Access](#)
- [2] Noor Nayyer, Nadeem Javaid, *et al.*, "An AutoEncoder and Deep Learning based Two Stage Scheme for Detecting Fraudulent Transactions in Credit Cards", Neural Computing and Applications (NCAA) (2023). (In review process)

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## Research Interest

Domain Artificial Intelligence, Cyber Security, Deception, Cryptography, Data Science, Machine Learning

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## Experience

Research Associate **Research Associate**, Communication Over Sensor (ComSens) Research Lab, Department of Computer Science, COMSATS University Islamabad, Islamabad 44000, Pakistan.

From Sept, 2021 to till date

### Responsibilities

Conducted lab sessions of **Programming for AI** under the guidance of Supervisor.

Led lectures on **Machine Learning** to undergraduate students.

Provided guidance to junior researchers, offering support for their research projects.

Visiting Lecturer **Computer Science Lecturer**, Department of Computer Science, Rawalpindi Women University, Rawalpindi, Pakistan.

From Sept, 2023 to Jan, 2024

### Responsibilities

Provide guidance and support to students during lab sessions, assisting them in implementing AI algorithms and techniques.

Deliver engaging lectures on topics related to Artificial Intelligence.

Visiting Lecturer **Computer Science Lecturer**, Department of Computer Science, Federal Urdu University of Arts, Science and Technology, Islamabad Campus, Pakistan.

From Nov, 2023 to till date

### Responsibilities

Delivered comprehensive lectures and hands-on sessions covering fundamental programming concepts, such as variables, control structures, loops and functions.

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## Achievements

### Roll of Honor

For BS, in recognition of dedication, hard work, and academic excellence

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## References

### Prof. Dr. Nadeem Javaid

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### Associate Prof. Dr. Mariam Akbar

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