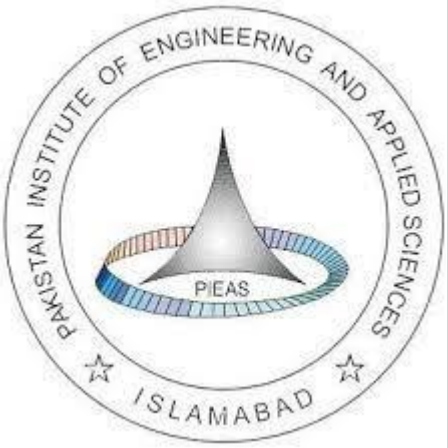

Semester Project Proposal

NATURAL LANGUAGE PROCESSING

SUBMITTED TO DR. IJAZ HUSSAIN

Title:

Deep Neural Networks for Bot Detection

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Title: Deep Neural Networks for Bot Detection

ABSTRACT:

Bots are automated accounts designed to mimic human behaviour, and they have been used to spread disinformation, influence political elections, manipulate the stock market, and promote dangerous conspiracy theories. Detecting bots on social media is a challenging task as they are designed to blend in with human users. In this project, we propose to develop a deep neural network-based bot detection system that can identify bots on social media platforms. Our approach involves training a deep neural network using a large dataset of labelled data and leveraging the power of deep learning to detect bots with high accuracy. We will also explore the use of transfer learning techniques to improve the performance of the bot detection system.

OBJECTIVES:

- Develop a deep neural network-based bot detection system.
- Build a labelled dataset of bot and human social media accounts.
- Explore transfer learning techniques to improve the performance of the bot detection system.
- Evaluate the performance of the bot detection system using classification accuracy metrics.

METHODOLOGY:

- Collect a large dataset of social media accounts labelled as bots or humans.
- Pre-process the dataset by cleaning the data and extracting relevant features.
- Develop a deep neural network architecture for bot detection and train the model using the labelled dataset.
- Explore transfer learning techniques to improve the performance of the bot detection system.
- Evaluate the performance of the bot detection system using classification accuracy metrics.
- Compare the performance of the proposed system with existing state-of-the-art bot detection methods.

EXPECTED OUTCOMES:

- A deep neural network-based bot detection system that can accurately detect bots on social media platforms.
- A labelled dataset of social media accounts for future research in bot detection.

- Improved performance of the bot detection system using transfer learning techniques.
- A better understanding of the use of deep learning for bot detection.

CONCLUSION:

Our proposed project aims to develop a deep neural network-based bot detection system that can identify bots on social media platforms with high accuracy. We will leverage the power of deep learning and explore transfer learning techniques to improve the performance of the bot detection system. The outcomes of this project will have significant implications in detecting bots and protecting against their harmful effects on society.