



**SECURAFACE – DEEP LEARNING MODEL TO
CREATE SYNTHETIC IMAGES AND VIDEOS**

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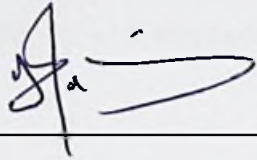
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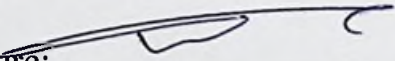
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We hereby declare that this project report is based on our original work except for citations and quotations which have been duly acknowledged. We also declare that it has not been previously and concurrently submitted for any other degree or award at Bahria University or other institutions.

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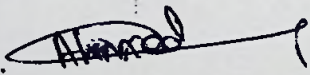
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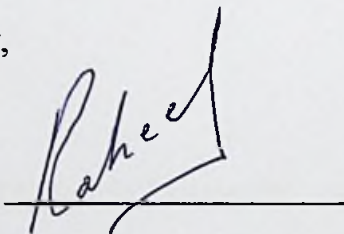
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APPROVAL FOR SUBMISSION

We certify that this project report entitled **“SECURAFACE – DEEP LEARNING MODEL TO CREATE SYNTHETIC IMAGE AND VIDEOS”** was prepared by **Muhammad Hashim, Moazzam Shah Khan, Ahmed Hassan** has met the required standard for submission in partial fulfilment of the requirements for the award of Bachelor of Science in **Computer Science** at Bahria University, Karachi.

Approved by,

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A handwritten signature in blue ink, appearing to read 'Raheel', is written over a horizontal line.

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Specially dedicated to

My beloved Mother and Father

Muhammad Hashim

My beloved Mother and Father

Moazzam Shah Khan

My beloved Mother and Father

Ahmed Hassan

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SECURAFACE – DEEP LEARNING MODEL TO CREATE SYNTHETIC IMAGES AND VIDEOS

ABSTRACT

The "SecuraFace" project investigates the development of synthetic films using deep learning and deepfake ideas. This project intends to create a system that can generate very realistic video sequences, allowing exact control and manipulation of the activities of a target, similar to a puppeteer directing a marionette. The project aims to push the frontiers of visual manipulation by combining advanced deep learning models and computer vision algorithms, providing a powerful tool for entertainment, virtual production, and video editing applications. The "SecuraFace" technology, which combines face identification, facial landmark tracking, and face synthesis algorithms, allows users to seamlessly incorporate synthetic faces into movies, giving them intuitive control over the target person's expressions and movements. This innovative approach also enables the creation of lifelike avatars for virtual reality environments, enhancing user interaction and immersion. Additionally, the system can be utilized for dubbing and localization of foreign films, providing precise lip synchronization and expression matching to maintain the authenticity of the performance across different languages. The project's findings demonstrate the system's promise while emphasizing the significance of responsible use and ethical issues in the field of deepfake technology. The development of guidelines and safeguards is crucial to ensure that such powerful tools are not misused, and the project underscores the importance of a balanced approach between technological advancement and ethical responsibility.

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