



FINAL YEAR PROJECT REPORT

**CONVERTING IMAGES TO 3D MODELS
USING
PHOTOGRAMMETRY**

**In fulfillment of the requirement
For degree of
BS (COMPUTER SCIENCES)**

By

AMMAR ANIS	65256 (BSCS)
SHAHEER SULEMAN	65200 (BSCS)
MOAAZ RAFIQUE	65248 (BSCS)

SUPERVISED

BY

MISS TOOBA MEHTAB

BAHRIA UNIVERSITY (KARACHI CAMPUS)

SPRING-2023

DECLARATION

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.

Signature: 

Name : Ammar Anis

Reg No. : 65256

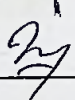
Date : 5/25/2023

Signature: 

Name : Shaheer Suleman

Reg No. : 65200

Date : 5/25/2023

Signature: 

Name : Moaaz Rafique

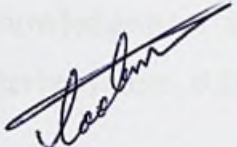
Reg No. : 65248

Date : 5/25/2023

APPROVAL FOR SUBMISSION

We certify that this project report entitled “**CONVERTING IMAGES TO 3D MODELS USING PHOTOGRAMMETRY**” was prepared by **Ammar Anis, Moaaz Rafique and Shaheer Suleman** 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,

Signature :  _____

Supervisor : Miss Tooba Mehtab

Date : 5/14/2023

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In addition, we would like to express our gratitude to our loving parents and friends who have helped and given us encouragement.

Specially dedicated to

My beloved grandmother, mother and father

(Ammar Anis)

My beloved grandmother, mother and father

(Shaheer Suleman)

My beloved grandmother, mother and father

(Moaaz Rafique)

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We would like to thank everyone who had contributed to the successful completion of this project. We would like to express my gratitude to my project supervisor, Miss Tooba Mehtab for her invaluable advice, guidance and her enormous patience throughout the development of the research.

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CONVERTING IMAGES TO 3D MODELS USING
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ABSTRACT

Photogrammetry, a technique that enables the creation of 3D models from 2D images, holds great potential for various applications. However, the current manual and time-consuming nature of the process hinders its widespread adoption. This research aims to address these challenges by developing a faster and more efficient photogrammetry workflow. Traditionally, photogrammetry relied on stereo pairs of images to generate digital elevation models. In this study, we propose a novel approach where multiple images of an object captured from various angles are used, with the prerequisite that the background scene remains static. These images are then loaded into our advanced photogrammetry software. To expedite the 3D modelling process, our methodology leverages mathematical algorithms and AI-driven learning-based techniques. By combining the power of computational mathematics and artificial intelligence, we aim to automate and optimize the reconstruction process, reducing the need for extensive manual intervention. The resulting output will be a 3D model with lower density but still possessing a high level of accuracy.

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