



FINAL YEAR PROJECT REPORT

VISIO RIDE: SMART SOLUTION FOR VISUALLY IMPAIRED PERSONS

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

By

TALHA AHMED KHAN

72964 (BSCS)

ANIQ AHMED

72978 (BSCS)

SYED MUHAMMAD TALHA ZIA

72953 (BSCS)

SUPERVISED

BY

MS.ASIA SAMREEN

BAHRIA UNIVERSITY (KARACHI CAMPUS)

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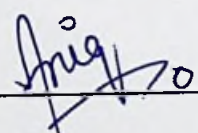
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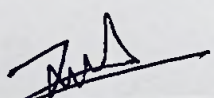
Name : Talha Ahmed Khan

Reg No. : 72964

Signature :  _____

Name : Aniq Ahmed

Reg No. : 72978

Signature :  _____

Name : Syed Muhammad Talha Zia

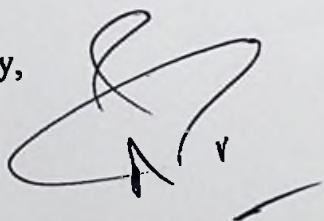
Reg No. : 72953

Date : 31-12-2024

APPROVAL FOR SUBMISSION

We certify that this project report entitled **“VISIO-RIDE SMART SOLUTION FOR VISUALY IMPAIRED PERSONS”** was prepared by **Talha Ahmed Khan, Aniq Ahmed, Syed Muhammad Talha Zia** has met the required standard for submission in partial fulfilment of the requirements for the award of **Bachelor of Science in Computer Sciences** at Bahria University, Karachi.

Approved by,



Signature : _____

Supervisor : Miss Asia Samreen

Date : 31 / 12 / 2024

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Specially dedicated to
My beloved mother and father
(Talha Ahmed Khan)
My beloved, mother and father
(Aniq Ahmed)
My beloved, mother and father
(Syed Muhammad Talha Zia)

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VISIO-RIDE SMART SOLUTION FOR VISUALLY IMPAIRED PERSONS

ABSTRACT

The proposed project seeks to tackle the hurdles faced by visually impaired individuals when utilizing public buses. In today's urban environment, those with visual impairments heavily rely on public transportation, particularly buses. However, the current infrastructure often lacks accessibility features, such as real-time information on bus availability, leading to discomfort and discouraging many from undertaking longer commutes. To address these challenges, this project presents a smart system leveraging Artificial Intelligence techniques, notably Natural Language Processing, to offer an inclusive solution. The system consists of two primary units: the User Unit and the Driver Unit. The User Unit, activated by a simple tap on the screen, serves as the central module. Through its integrated voice assistant, users can effortlessly access comprehensive bus details, track bus locations in real-time, and receive timely updates on bus arrivals. Meanwhile, the Driver Unit allows authorized bus drivers to activate location services, continuously updating the server with real-time coordinates. This two-unit system ensures a comprehensive approach to enhancing accessibility. Furthermore, the system includes preinstalled routes for regular bus services, ensuring that users have access to essential information for their everyday commutes. Additionally, it features a customizable route option for emergencies, allowing for dynamic adjustments based on unforeseen circumstances. Moreover, the system incorporates pop-up notifications to remind drivers of the next stop where a visually impaired individual is waiting for the bus, enhancing the overall safety and convenience of the service.

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