## ABSTRACT

This internship report presents a comprehensive overview of the practical training and industry exposure I received during my internship at **Sathlokhar Synergys E&C Global Ltd.**, executed at the **TIDEL AERO HUB project site**, located in SIPCOT Industrial Park, Vallam Vadagal. The internship, titled **"A Comprehensive Internship at TIDEL AERO HUB us Visualizing the Future into Realistic 3D Models,"** offered an in-depth blend of field-based learning and digital construction technologies, fostering a holistic understanding of modern civil engineering practices.

Throughout the internship, I actively participated in various core construction activities such as **site execution, material handling, formwork, block work, reinforcement laying, concrete casting, and finishing works**. These experiences provided first-hand insights into the technical, safety, and managerial challenges encountered during realtime construction projects. I also developed a clear understanding of the roles and responsibilities of different stakeholders on a construction site and how efficient coordination among labor, materials, and supervision contributes to timely project delivery.

In addition to on-site work, I was involved in **billing and quantity estimation tasks**, gaining practical knowledge of measurement techniques, rate analysis, and the preparation of interim payment certificates. This experience allowed me to connect engineering drawings and specifications with financial documentation and project budgeting, a crucial aspect of construction management.

Moreover, my internship provided substantial exposure to digital tools widely used in the Architecture, Engineering, and Construction (AEC) industry. I worked on **AutoCAD** for 2D drafting and detailing, **Revit** for BIM-based 3D modeling and project coordination, and **Lumion** for architectural visualization and realistic rendering. These tools enabled me to understand how digital design workflows enhance accuracy, collaboration, and communication among project teams.

The report is organized into multiple chapters, each focusing on a specific domain of learning—ranging from on-site execution and billing processes to software applications and business development management. Each chapter outlines the tasks I performed, the skills I acquired, and the professional competencies I developed.

This internship has served as a vital link between classroom theory and practical implementation. It has significantly enhanced my technical knowledge, software proficiency, problem-solving abilities, and understanding of integrated project delivery in the construction industry. More importantly, it has strengthened my preparedness for a career in **Construction Management** and **BIM-driven Design**, aligning with the evolving demands of the modern AEC sector.