Shreyansh Ajmera

Contact Details:
+44 7884516422
ajmerasheyansh52@gmail.com
linkedin.com/in/shreyanshajmera

Engineer – Major Projects UK, Ramboll

Enthusiastic and results-driven bridge design engineer with 6 years of experience in the civil engineering industry, specialising in the design and analysis of complex bridge structures. Passionate about structural engineering and skilled at solving both complex and repetitive challenges through innovative and efficient solutions.

Proficient in Eurocodes, with working knowledge of AASHTO LRFD. Strong interest in FE modelling and computational design, with hands-on experience using tools such as SOFiSTiK, Grasshopper, Rhino, Karamba 3D, and LUSAS to enhance workflows, improve design accuracy, and optimise structures. Committed to continuous learning, mentoring junior engineers, and integrating advanced digital methods to deliver high-quality, sustainable bridge solutions. Currently progressing towards ICE chartership, with a target to appear for Chartered Professional Review (CPR) next year.

Area of Expertise

Analysis and Design of Bridges, Parametric Modelling and Optimization - Computational Design

Skills

SOFiSTiK	Rhino-Grasshopper	MS Office
LUSAS	Mathcad	ASBD
Oasys AdSec	AutoCAD	IDEA StatiCa (Basic)
Solibri Office	Python	

Career

Assistant Design Engineer – Ramboll India Pvt Ltd (July'19 – June'23)
Design Engineer – Major Projects, Ramboll UK (June'23 – Present)

Key Project Experience

E6-Ranheim-Sveberg, Norway (May'25-Present)
Client: HÆHRE
Concept design of the K31 Vulu Bridge, a three-span integral post-tensioned slab deck bridge with a maximum span of 33 m. Developed the analytical line model in SOFiSTiK and prepared comprehensive load calculation sheets. Carried out structural analysis and finalised the preliminary cross-sections of the deck, inner and outer piers, and pier heights. Optimised the post-tensioning cable profile to ensure efficient structural behaviour. The design and analysis were performed in accordance with Manual N400 (Norwegian standard) and Eurocodes. Coordinated effectively with geotechnical engineers and technicians across different geographic locations.

Ny Ölfusárbrú, Iceland (Sept'24-April'25)
Client: ÞG-Verk
Detailed design of the cable-stayed bridge abutments integrating advanced tools such as SOFiSTiK, Rhino–Grasshopper, and Excel. Extracted geometric and design data from a central SPoT (Single Point of Truth) Excel database via the Rhino–Grasshopper interface to streamline and parametrise the analytical model. Developed a parametric shell model in SOFiSTiK and completed the detailed design of the abutments. Prepared reinforcement sketches for technician input, coordinating closely with teams in India and Denmark. Collaborated with the geotechnical team to determine earth pressure coefficients under various design scenarios and to finalise soil bearing capacity. Reviewed and commented on the 3D model using Trimble Connect to ensure coordination and accuracy.

Genova Breakwater, Italy (Sept'23-Sept'24)
Client: F&M ingegneria
Detailed design of the breakwater caissons under extreme wave conditions. Developed a parametric model in SOFiSTiK for multiple caissons with varying geometries and loading scenarios. Prepared wave

pressure calculation spreadsheets based on the Coastal Engineering Manual, Part VI. Coordinated with a team of technicians in India to develop detailed caisson drawings.

E6-Ranheim-Værnes, Norway (July'21-Feb'23)
Client: Acciona Construction
Detailed design of several overbridges on the E6 highway, all designed as three-span voided deck integral bridges. Involved in concept design tasks such as determining dimensions, void arrangements, pier locations and numbers, and initial tendon profiles. Prepared load calculation sheets and grillage models in SOFiSTiK and applied them accordingly. Designed longitudinal members and piers using SOFiSTiK's in-built modules. Developed local shell models for the design of ballast and wing walls. Also completed the transverse deck design, and the design of pad foundations, pile caps, and piles using Mathcad. Created project schedules and performed self–QA checks to ensure timely, high-quality deliverables. Prepared technical reports, BoQ, Safety-in-Design documentation, and checklists, and coordinated with technicians on the 3D model for 400MMI.

Laos Bridge, LAO PDR (Mar'20 -May'20)
Client: Lao PDR Ministry of Information, Culture and Tourism
Detailed design of a three-span simply supported beam–slab bridge using LUSAS and in-house Excel spreadsheets. Developed design tools for all bridge components in accordance with AASHTO standards. Coordinated with technicians to prepare drawings, assisted the principal engineer in compiling the design report, and produced the BoQ. Attended client meetings, prepared project schedules, and resolved design comments effectively.

Professional Development & Training

LUSAS Software Training – Grillage Modelling & Vehicle Load Application
Internal training, 2022
Delivered a structured training session to colleagues on grillage modelling and vehicular loading in LUSAS, including the use of moving load and Vehicle Load Optimisation (VLO) features. Covered practical modelling tips and demonstrated how to interpret results for bridge design applications.

Introductory Training – SOFiSTiK and Grasshopper
Ongoing Internal Sessions
Provided informal technical training to junior staff on getting started with SOFiSTiK and Rhino-Grasshopper workflows for parametric modelling and structural analysis, illustrating concepts with real project examples.

Professional Memberships

Institution of Civil Engineers (ICE) – Graduate Member
Currently pursuing Chartered Engineer (CEng MICE) status through the ICE.
25 out of 35 attribute levels completed; aiming to achieve chartered status by mid-2026.
CITB CSCS Card
CSCS Card for Managers and Professionals valid till 2029

Technical Initiatives & Automation Projects

In addition to project-specific tasks, I have developed advanced Grasshopper scripts to perform linear structural analysis using Karamba3D, enabling quick parametric studies within the Grasshopper environment. I also created customised interoperability tools by linking Grasshopper with LUSAS and SOFiSTiK to streamline the generation and updating of analytical models. As a design optimisation exercise, I modelled a tied-arch bridge and used the Galapagos evolutionary solver in Grasshopper to identify efficient design solutions based on multiple performance criteria.

Academic Qualification

Master of Technology in Structural Dynamics from IITR, India in 2019
Bachelor of Technology in Civil Engineering from UKA Tarsadia University, India in 2016

Languages Known

English – Professional Proficiency Hindi – Mother tongue