

JISHNU T

Naval Architect • Design Engineer • Ocean Engineer

Ship Design / Structural Engineering / Offshore Platform Analysis / Production Engineering

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Open to International Relocation

PROFESSIONAL SUMMARY

A dedicated and technically versatile **Naval Architect and Ocean Engineer** (B.Tech, First Class with Distinction, CGPA 8.17/10, Indian Maritime University) with applied experience across **structural ship design, classification-rule-based scantling calculations, offshore platform stability analysis, shipyard production engineering, and high-speed craft concept design**. Currently engaged as a Design Engineer at a TCS-client maritime project, delivering **class-approved structural design packages**, engineering compliance documentation, and multidisciplinary coordination for active shipbuilding programmes. Proficient in **Maxsurf 3D, Bentley MOSES, Tribon M3, Cadmatic, AutoCAD, IRHull, and Siemens NX**; conversant with **IMO, SOLAS, MARPOL, IS Code, DNV-OS, LR, BV, ABS, and IRS** regulatory frameworks. Hands-on exposure to **offshore spar-platform analysis** directly relevant to FPSO, jackup, and semi-submersible operations across global deepwater and offshore energy sectors. Experienced with **FRP composite construction**, lifting plan development, block-build planning, and production-ready engineering deliverables. A motivated, adaptable engineer seeking challenging roles in **ship design, offshore structural engineering, marine consultancy, or shipyard engineering** across global markets.

CORE COMPETENCIES

- Naval Architecture & Ship Design
- Hydrostatics & Hull Form Design
- Intact & Damage Stability Analysis
- Structural Design & Scantling Calc.
- Finite Element Analysis (FEA) Concepts
- Seakeeping & Hydrodynamic Analysis
- Resistance & Propulsion Engineering
- Offshore Platform Analysis (FPSO / Spar)
- IMO / SOLAS / MARPOL / IS Code
- DNV, LR, BV, ABS Classification Rules
- Production & Shipyard Engineering
- Block Planning & Lifting Operations
- Ship Repair & Drydocking Concepts
- FRP & Composite Marine Structures
- Material Take-off & Weight Estimation
- Class-Approved Technical Documentation
- Engineering Drawing Interpretation
- Cross-functional Team Coordination

TECHNICAL SKILLS

Naval Architecture Software	Maxsurf 3D (Resistance, Stability, Structure), Bentley MOSES, IRHull, Tribon M3, Cadmatic, Siemens NX
CAD & 3D Modelling	AutoCAD (2D & 3D), SolidWorks
Programming & Scripting	Python (Data Processing, Automation), C (Basic), Shell / Bash Scripting
Office & Documentation	MS Office Suite (Excel, Word, PowerPoint), Technical Report Writing, Engineering Calculations
Regulatory Frameworks	IMO SOLAS, MARPOL, IS Code 2008 & 2020, DNV-OS Series, LR Rules, BV Rules, ABS Rules, IRS Guidelines, IACS Unified Requirements
Soft Skills	Leadership, Cross-cultural Communication, Project Coordination, Problem Solving, Time Management, Adaptability

PROFESSIONAL EXPERIENCE

Ebizon Net Info Pvt. Ltd. (Client Deputation: TCS Maritime Division)

Design Engineer – Naval Architect

July 2025 – Present

Gurugram, Haryana, India

- Perform **structural design and strength calculations** for foundations, bulkheads, stiffened panels, deck plating, watertight compartments, and primary structural members in compliance with **applicable engineering design standards, structural codes, and project-specific technical specifications**, ensuring full structural integrity across all design load conditions.
- Generate comprehensive **standards-compliant engineering deliverables** – structural arrangement drawings, scantling calculation reports, material take-off (MTO) lists, and detailed design documentation – meeting client quality assurance requirements and technical authority review standards.
- Validate structural designs through systematic rule-based checks and engineering assessment, consistently achieving **first-pass approval by technical review authorities**, minimising review iterations and accelerating overall project delivery timelines.

- Coordinate across multidisciplinary engineering teams spanning hull structure, outfitting, piping, machinery, and electrical disciplines to maintain design consistency, cross-discipline integration, and on-schedule delivery of complete engineering construction packages.
- Ensure all engineering outputs conform to **applicable structural integrity standards, design codes, and project-specific technical requirements**, maintaining rigorous documentation and configuration control throughout the complete design lifecycle.
- Translate approved design drawings into **production-ready fabrication packages**, supporting downstream manufacturing workflows, improving shop-floor accuracy, and reducing on-site rework.

Cochin Shipyard Limited (CSL) – India's Largest and Premier Public Sector Shipyard

June 2024 – July 2024

Naval Architecture Intern

Kochi, Kerala, India

- Supported **shipyard layout analysis and block-build planning** within a world-class facility responsible for constructing major defence and commercial vessels including aircraft carriers and offshore support vessels; gained direct insight into large-scale newbuild project execution.
- Prepared and reviewed **lifting plans** for structural blocks and major assemblies, applying load distribution and rigging safety calculations to ensure safe, code-compliant crane operations across the shipyard.
- Executed production design tasks using **Tribon M3 and Cadmatic**, producing 3D structural hull models, outfitting layouts, and manufacturing drawings for ongoing newbuild programmes.
- Evaluated safety protocols and production sequencing in shipbuilding operations; contributed recommendations supporting workflow optimisation and reduced non-productive time in the production engineering division.

Praga Marine Pvt. Ltd.

July 2024

Naval Architecture Intern – Composite Craft Division

Aroor, Kerala, India

- Gained practical exposure to **FRP (Fibre-Reinforced Polymer) boat and catamaran hull manufacturing**, covering the complete production cycle from mould preparation and lamination through final assembly, finishing, and quality inspection.
- Studied material selection methodology covering E-glass fabrics, woven roving, chopped strand mat, and polyester / epoxy resin systems, along with lamination schedules and quality control protocols aligned with classification requirements for small craft construction.
- Developed applied understanding of **composite lightweight structural design** principles and manufacturing constraints relevant to high-performance patrol boat, high-speed ferry, and offshore workboat sectors.

National Institute of Ocean Technology (NIOT) – Ministry of Earth Sciences, Govt. of India

June 2023 – July 2023

Naval Architecture Intern – Offshore Structures Division

Chennai, Tamil Nadu, India

- Conducted end-to-end **hydrostatic and stability analysis of a deepwater spar-type offshore platform** using **Bentley MOSES**, producing a complete stability booklet covering all prescribed loading conditions, metacentric heights, and righting lever (GZ) curves.
- Rigorously cross-validated all computational stability outputs against **IMO IS Code 2008/2020 and DNV-OS stability criteria**, achieving **first-pass regulatory compliance approval** and demonstrating precision, technical thoroughness, and command of international offshore safety standards.
- Strengthened specialist knowledge in **deepwater offshore structure global performance**, hydrostatic restoring characteristics, environmental load assessment, and regulatory frameworks applicable to FPSO, spar, semi-submersible, TLP, and jackup platform types.
- Demonstrated ability to work on complex offshore engineering problems within a government research environment, reinforcing competencies in **offshore structural analysis, FEED-level calculations**, and regulatory documentation.

KEY ACADEMIC PROJECTS

Project 1: Preliminary Design of a 300-Passenger High-Speed Catamaran Ferry

Indian Maritime University,

Visakhapatnam

- Executed full concept-level and preliminary naval architecture design of a **36.75 m, 28-knot high-speed wave-piercing catamaran ferry** for the commercial Beypore–Cochin passenger route, covering hull form design, resistance prediction, propulsion selection, structural layout, and stability verification.
- Selected and validated the **Rolls-Royce Kamewa S3-45 waterjet propulsion system** paired with **MTU 16V 4000 M53 marine diesel engines**; computed propulsion power balance, fuel consumption, and endurance envelope for the design service speed and route profile.
- Performed **resistance estimation using Maxsurf 3D (slender-body theory)**, iteratively refining demihull geometry to minimise total resistance, optimise hydrodynamic efficiency, and reduce fuel consumption at design draught.
- Analysed spatial and structural constraints including internal deck arrangements, propulsion tunnel geometry, shaft alignment, draft limitations, and longitudinal weight distribution for a balanced and serviceable vessel.

- Verified full design compliance with **IMO High-Speed Craft (HSC) Code 2000**, **SOLAS Chapters III & IV**, intact stability requirements of the IS Code, and applicable passenger ship safety regulations.

Project 2: Concept Design – Tethered Amphibious Hull Inspection & Cleaning (HISC) Robot

- Conceptualised and developed a **tethered underwater robotic inspection and biofouling cleaning system** targeting reduction in costly drydocking intervals, hull maintenance expenditure, and vessel off-hire time for commercial shipping.
- Produced the complete 3D mechanical design in **SolidWorks** and scripted control logic in **Python**; integrated **cavitating water-jet cleaning nozzles** for efficient, damage-free biofouling removal from coated hull surfaces.
- Addressed industry demand for **in-water survey (IWS)** and **in-water inspection (IWI)** equivalency; design principles aligned with **IACS UR Z17** and classification society guidelines for ROV-based hull survey equivalency.

EDUCATION

Bachelor of Technology – Naval Architecture & Ocean Engineering **2021 – 2025**

Indian Maritime University (IMU), Visakhapatnam (Central University, Ministry of Ports, Shipping & Waterways, Govt. of India) *CGPA: 8.17/10 | First Class with Distinction*

Class XII – Science (Physics, Chemistry, Mathematics & Biology) **2019 – 2021**

Kendriya Vidyalaya Payyanur, Kerala (CBSE – All India Senior School Certificate Examination) *Grade: 95.4%*

Class X – All India Secondary School Examination (AISSE) **2018 – 2019**

Kendriya Vidyalaya Payyanur, Kerala (CBSE) *Grade: 91.6%*

CERTIFICATIONS & PUBLICATIONS

- **Offenso Certified Security Professional** – Cyber Security Domain (Ethical Hacking, Network Security, Vulnerability Assessment); demonstrates systematic analytical and risk-assessment thinking applicable to engineering system integrity.
- **Defronix Certified Junior Security Professional** – Penetration Testing & Information Security Fundamentals.
- **Conference Poster Presentation – CCMARPOL 2023:** “Autonomous Firefighting System to Reduce the Environmental Impact of Shipboard Fires” – presented at a national maritime regulatory conference; demonstrates interdisciplinary innovation in ship safety engineering and MARPOL environmental compliance.

LEADERSHIP & EXTRACURRICULAR ACTIVITIES

- **House Head – Nirghat House**, Indian Maritime University (2023–2024): Managed welfare, discipline, and inter-house events for a residential cohort of **60+ students** from diverse regional backgrounds; developed leadership, cross-cultural communication, conflict resolution, and organisational skills in a structured maritime institutional environment.
- **Member, Anti-Ragging Committee**, Indian Maritime University (2024–2025): Contributed to institutional governance, student safety policy implementation, and campus welfare initiatives; demonstrated accountability, ethical conduct, and institutional commitment.

LANGUAGES

English (Professional – C1) **Malayalam** (Native – C2) **Hindi** (Proficient – B2)