Pritam Patel

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Gender: Male **Date of birth:** 07/05/1991 **Nationality:** Indian

ABOUT ME

Graduated in **Mechanical Engineering** and Post-Graduated in **Naval Architecture & Ocean Engineering** in Hydrodynamics Specialization having 5+ years of experience as a **Vessel Performance Analyst** and Research Engineer (Design, Optimization & Data Analytics). Currently pursuing Advanced Masters in **Sustainable Ship and Shiping 4.0** programme sponsored by Erasmus Mundus. Worked majorly on Vessel performance monitoring and performance improvisation with wide experience on CFD Multiphase with Hydrodynamics motion analysis in ship performance optimization along with Big Data Analytics, Data Visualization & Data Correlation Analysis.

WORK EXPERIENCE

[20/05/2020 – 09/09/2021] **Vessel Performance Analyst / Naval Architect**

Maersk Tankers

City: Mumbai
Country: India
Main activities and responsibilities:

- Setting up Technical Baselines target & Performance model of the individual vessel for performance monitoring.
- Vessel's reported data quality inspection and analyzing data through the performance monitoring system.
- Data analysis with the reported vessel data to predict the KPI for vessels.
- Continuously monitoring, updating, and providing vessel-specific fuel table as per request.
- Monthly performance report creation and performance review of individual vessels.
- Underwater diving support for Hull Inspection & Cleaning with close collaboration with vendors and agents.
- Power BI Dashboard for Data visualization to analyze performance and comparison from baselines.

[02/12/2019 – 30/04/2020] **Naval Architect (Hydrodynamics)**

DNV GL

City: Bangalore
Country: India
Main activities and responsibilities:

- Flow modeling and wake analyses around the wind farm to optimize the turbine layout.
- Site Inspection of the wind farm for mast installation.
- Wind data analysis, Energy Prediction, Uncertainty Analysis of the wind farm.

[09/05/2016 – 29/11/2019] **Naval Architect (Vessel Performance)**

Indian Register of Shipping, IRCLASS

City: Mumbai
Country: India
Main activities and responsibilities:

- **Ship performance Improvement** (Fuel Consumption Monitoring and Optimization) and analyses for Ship Weather Routing (considering real-time wave, current & wind modeling with hydrodynamics motions) with the help of CFD Analysis along with weather routing tool development with previous voyage data correlation and trend analysis.
- **Vessel Performance Monitoring System (VPMS)**: Big-Data Analyses for ship performance optimization for both Hull and Engine with the help of real-time sensors data monitoring installed on-board ship.
- **Trim Optimization** of Ships in terms of Resistance using CFD Multiphase motion analysis using Star-CCM+ along with Trim Tool Development using Python and data visualization heat map for onboard ship operation for improved fuel efficiency.
- Flow Analysis and Design Optimization including new retrofitting in the ship using CFD Tool including 3D CAD Modeling.
- Concept development and design optimization for impact load fatigues in Jacket platform legs due to high impact waves.
- Sediment Flow Analysis in Ballast Water Tank to optimize tank design and development of tank with new optimized dimensions.
- Light Weight Barge Design for Inland Waterways Transportation: Fluid-Structure Interaction (FSI) Simulation of non-linear Rubber materials filled with Air and interacting with water with physical model testing.
- Ship to Ship Collision FSI analyses with Explicit Dynamic simulations using Hypermesh RADIOSS with SPH meshing technique.
- Propeller Flow Analysis for improved design of ship aft to maximize ship propulsion efficiency using Rigid Body Mesh Motion Technique.
- Wake modeling of Propeller Flow: Propeller positioning and distance optimization of propeller behind the ship hull to optimize the behind flow for maximizing propeller efficiency.

Tools & Skill Sets:

- Programming & Data Visualization Tools: Python, MATLAB, Tableau, Excel
- CFD: Star-CCM+, AcuSolve, Ansys Fluent
- Meshing & FEA: Hypermesh, Radioss, ICEM CFD, ANSYS
- 3D Modeling CAD: CATIA, NX, Auto-CAD, Maxsurf

[02/07/2015 – 25/12/2015] **Assistant Professor**

AMET University

City: Chennai
Country: India
Main activities and responsibilities:

- Subjects Deals with knowledge of Ship Design and the basics of Naval Architecture.
- Ship Design Projects with Hydrostatics calculations.
- Project supervision of “Ship hull form optimization for ship efficiency improvement”.

EDUCATION AND TRAINING

[13/09/2021 – Current] **Master's in Sustainable Ship and Shipping 4.0**

University of Naples, Federico II

Address: Naples, Italy
Main subject / occupational skills covered:
Major Courses Undertaken:

- Regulatory Framework for Maritime Industry 4.0
- Alternative Fuels For Shipping
- Robotics & Underwater Robotics
- Industrial Internet of Things (IIoT)
- Ship Operations & Decision Support Systems
- Transport economics
- Digital twin in marine system

[03/06/2013 – 30/05/2015] **Master's in Naval Architecture & Ocean Engineering**

Indian Maritime University https://www.imu.edu.in/

Address: Visakhapatnam, India
Final grade: 8.93/10

[01/06/2009 – 31/05/2013] **Bachelors in Mechanical Engineering**

Government College of Engineering http://www.gcekjr.ac.in/

Address: Keonjhar, India
Final grade: 8.12 / 10

[02/06/2014 – 20/06/2014] **In-plant Training in COCHIN SHIPYARD LTD.**

COCHIN SHIPYARD LTD. https://cochinshipyard.com/

Address: Cochin, India

[02/12/2014 – 05/12/2014] **Hydrodynamics Experimental Studies**

IIT, Kharagpur http://www.iitkgp.ac.in/

Address: Kharagpur, India

DIGITAL SKILLS

Programmin language PYTHON | Computational Fluid Dynamics (CFD) | Power BI, Power Query | Tableau (data analysis) | Star-ccm+ | Hypermesh (FEM) | Acusolve | ANSYS WOrkbench | HyperWorks (HyperMesh Optistruct RADIOSS HyperView) | CATIA V5/V6 | Bentley Maxsurf | Auto CAD | Very good knowledge of MS Office (Outlook Word PowerPoint Excel)

PUBLICATIONS

[2015] **NUMERICAL INVESTIGATION OF THE INFLUENCE OF WATER DEPTH ON SHIP RESISTANCE.**

Reference: https://www.ijcaonline.org/archives/volume116/number17/20427-2750

[2019] **SIMPLIFIED SHIP TO SHIP COLLISION MODEL**

Reference: Altair Technology Conference, Bangalore, India

PROJECTS

Machinery Running Hours Optimization (Real-Time Running Hour Optimizer)

Machinery running hours Dashboard has been developed which was capable to represent each month running hours for each of the vessels in turns which were estimating the excess running hours for each of the equipment compared with their respective baselines. The analytics were used for optimizing the vessels' excess equipment running hours in reducing the excess consumption and GHG emission.

[03/06/2019 – 25/11/2019] **Vessel Performance Monitoring System (VPMS)**

Big-Data Analyses for ship performance optimization for both Hull and Engine with the help of real-time sensors data monitoring installed on board ship.

[01/02/2019 – 30/05/2019] **Trim Optimization**

Trim Optimization of Ships in terms of Resistance using CFD Multiphase motion analysis using Star-CCM+ along with Trim Tool Development using Python and data visualization heat map for onboard ship operation for improved fuel efficiency.

[02/01/2015 – 29/05/2015]

Study of Interrelation between Deep and Shallow water Ship Resistance and Maneuvering Characteristics.

The present work describes the effect of shallow water on the ship resistance and manoeuvring using Computational Fluid Dynamics (CFD) techniques of the vessel DTMB 5415 with scale ratio, λ=24.830 with LPP =5.72.

HONOURS AND AWARDS

[13/08/2015] **Silver Medal Awarding institution:** Indian Maritime University

Awarded with Silver Medal by Indian Maritime University for achieving 2nd rank in M. Tech.

[14/07/2019] **Best Paper Award Awarding institution:** Altair

Received Best Paper Award for non-linear explicit dynamic simulation in Altair conference, Bangalore.