Shubham Garg

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Skills

Coding	C/C++, C#, Python, ROS, Matlab, MOOS, MOOS-IvP, …
Languages	Strong reading, writing and speaking competencies for English, Hindi. Minimal knowledge of Portuguese.
Automation Development	Embedded Systems, PCB Design and Fabrication, Non-Linear Control Systems, Navigation Filters.
Word Processing and Graphics	CorelDRAW, Microsoft Office, Sketch-Up(CAD), Unity3D, LaTeX
Web Dev	HTML, CSS, PostgreSQL, Docker, Git, Gitbook, Hugo
Misc.	Ship Experience: Arabian Sea - RV Sindhu Sankalp.

Employment History

2018 – · · · · **Research Engineer** Instituto Superior Tecnico, Lisbon, Portugal

2017 – 2018 **Intern** Marine Instrumentation Division, National Institute of Oceanography, Goa, India.

Software Engineer Shell Ocean Discovery XPRIZE Team, Team Oceanzus, Durham, USA(Remote).

2016 – 2018 **Team Leader** Student Research Team, Team DTU AUV.

Education

2014 – 2018 **B.Tech in Engineering Physics**
Delhi Technological University, Delhi, India

2020 – 2021 **PG Diploma in Advanced Maritime Laws**
NALSAR University of Law, Hyderabad, India

2021 – 2023 **EMJMD in Master in Marine and Maritime Intelligent Robotics**
Year 1: *Université de Toulon (UTLN, France)*
Year 2: *Norwegian University of Science and Technology (NTNU, Norway)*
Note:Program postponed to fall 2021 due to the Coronavirus pandemic

Research Publications

Conference Proceedings

1. **Garg, S.**, Joao, Q., Joao, C., & Pascoal, A. (2020). NetMarSyS - A Tool for the Simulation and Visualization of Distributed Autonomous Marine Robotic Systems, In *Auv 2020 ieee/oes autonomous underwater vehicle proceedings*.

2. **Garg, S.**, Afzulpurkar, S., & Kumar, A. (2019). Adaptive Biased Random Walk Algorithm for Ocean Chemical Feature Tracking using an Autonomous Underwater Vehicle, In *Oceans 2018 mts/ieee charleston, ocean 2018*. https://doi.org/10.1109/OCEANS.2018.8604733

3. **Garg, S.**, Pascoal, A., & Afzulpurkar, S. (2019). Heuristics-based adaptive biased random walk algorithm for chemical source localization using AUVs, In *Oceans 2019 mts/ieee seattle, oceans 2019*. https://doi.org/10.23919/OCEANS40490.2019.8962882

Miscellaneous Experience

Awards and Achievements

2018 **Participant**, Shell Ocean Discovery XPRIZE Challenge.

2017,18 **Participant**, Singapore AUV Challenge.

2016 **Finalist**, Shell Eco-Marathon Asia.

2015 **First Place**, Broadcomm IOT Challenge.

2013 **Event at Rashtrapati Bhavan**, Met the Former President of Indian, Shri Pranab Mukherjee.

2012 **State Rank 1**, Department of Science and Technology INSPIRE Challenge.

Certification

2019 **Level C1**. International English Language Testing System.

Project

2020 **NetMarSyS - A Tool for the Simulation and Visualization of Distributed Autonomous Marine Robotic Systems**
A tool to model and visualize the behaviour of marine vehicles in three-dimensional space for surface and subsurface applications with a special focus on complex multi-vehicle cooperative mission scenarios.

2019 **Medusa-Vx**
An open-source project to develop a complete Guidance-Navigation-Control solution for Autonomous Underwater Vehicle, with state machine and simulation packages to aid in rapid development of marine-crafts

2018 **OceanTech**
This project aims to research and advance technological products, processes and services for deep ocean exploration and foster the growth of the blue economy. Relevant technical objective of the project include development and implementation of a range-based navigation algorithm for acoustics-based autonomous docking using a Hybrid-Deep Sea AUV/ROV

References

Available on Request