Smart Remote Operation Center

Project Course 2022-2023

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![NOVIA UNIVERSITY OF APPLIED SCIENCES]

Smart Remote Operation Center

- **Remote Pilotage**
  Remotely guide vessels to shore

- **Remote Shipping**
  Completely remote operated vessels

- **Autonomous Shipping**
  Completely autonomous ships

"The world's first company set up to operate autonomous vessels"

"DNV has introduced the shipping industry's first competence standard for vessel remote control centre operators (RCCO)."

"Wärtsilä successfully tests remote control ship operating capability"

"…the world's first autonomous and zero-emission container vessel: Yara Birkeland…."

"…focusing on creating solutions that will reduce navigation crew stress and ensure peace of mind during operation…."

"Proud to be the provider of this digital operation center for future education of Mariners and development of new operational models, like remote pilotage."

AI Remote Operation Center

Autonomous Vessel Remote Operation Center (ROC)

- ROC are typically designed to resemble real command bridges
  - Radar
  - Electronic Chart Display and Information System (ECDIS)
  - Camera

- Should make full use of the available data and visualization capabilities

Smart Remote Operation Center

Computer Vision, Machine Learning, Data Analysis

- **Computer Vision**
  Semantic segmentation and tracking of ships

- **Speech to text**
  Identify ships from radio communication

- **Data analysis**
  Enhance navigational data

- **UI/UX design**
  Visualization for situational awareness

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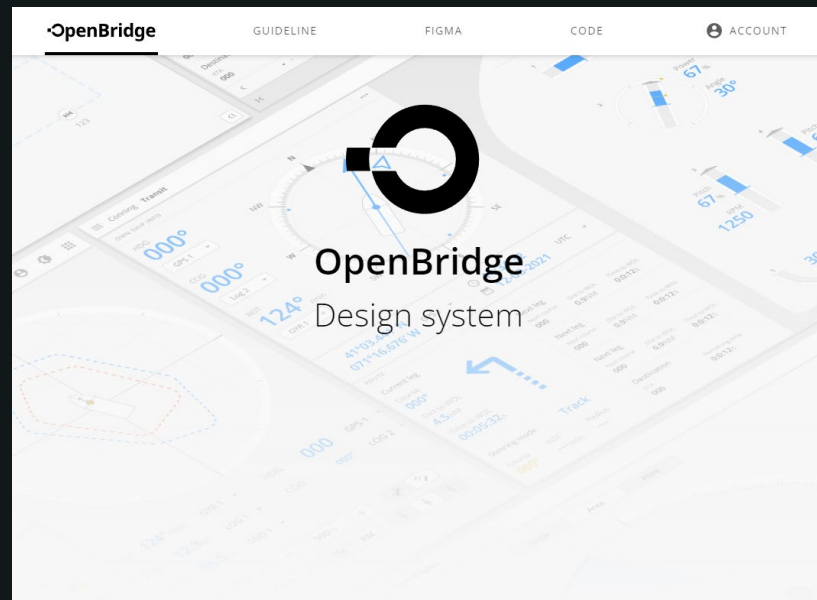**Computer Vision, Machine Learning, Data Analysis**

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openbridge.no

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Please contact us if you are interested!

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