BIR BIKRAM DEY

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EDUCATION

York University
Sept 2018-Sept 2020
M.Sc. Computer Engineering –
- Robotics

McGill University
Sept 2005-Sept 2009
B.A.Sc. Mechanical Engineering –
- Robotics

Relevant Courses:
- MECH 498 and 499
  Interdisciplinary Design Project
- MECH 463D1 and 463D2
  Mechanical Engineering Project

Skills

Design
- **Solidworks – 11+ Years**
- **Simulation – 9+ Years**
- **Eagle Cad – 3+ Years**
- **Ansys – 2+ Years**

Software
- **MATLAB – 2+ Years**
- **Elec. Workbench – 2+ Years**

Highlights

- **Simulation – 9+ Years**
- **DFM – 9+ Years**

💼 Experience

YORK UNIVERSITY| Research Assistant   2017 – Current
Developing a tele-operated spherical robot for surveillance and mapping. Assisted in the development of an autonomous wheelchair.

- ✓ ROS
- ✓ Python
- ✓ Carbon Fiber molding
- ✓ OpenCV

COLLINEO INC.| Contract Engineer   2015 – 2017
Assisted in the development of a portable Telescope System for windmill inspection.

SCHMIDT OCEAN INSTITUTE| Mechanical Engineer   2016 – 2017
Mechanical engineer in SOI for manufacturing ROV. The goal of the job is to design, manufacture, and deploy a ROV for the scientist to research marine life. Usual design projects included:

- ✓ FEA (Underwater Vessels)
- ✓ Project Management
- ✓ Seal Design
- ✓ Thermal modelling
- ✓ Hydraulic System
- ✓ EPDM

SUBC IMAGING | Project Engineer   2013 – 2015
Project engineer in SubC imaging for manufacturing underwater camera and oil rig monitoring systems. Designing, manufacturing, quality control for each project was performed. Usual design projects included:

- ✓ FEA (Underwater Vessels)
- ✓ Project Management
- ✓ Static/Dynamic Seal Design
- ✓ FMEA
- ✓ Thermal Management
- ✓ Camera Optics
- ✓ EPDM

INDEPENDENT ROBOTICS | Project Engineer   2010 – 2013
Project Engineer for Independent Robotics for the development of the amphibious underwater autonomous platform. The goal of the job is to improve the platform for any project specific configuration also designing and production of the robot. Responsibilities include:

Research and development

- ✓ Sensors
- ✓ Locomotion System
- ✓ Fluid Flow Analysis and Modelling
- ✓ FEA

Maintenance and updated

- ✓ AQUA Robot
- ✓ BOM
- ✓ PDM (Solidworks)
- ✓

Repair and production

- ✓ AQUA Robot
- ✓ MARE (Autonomous Surface Vehicle)

📜 Papers

Monitoring Re-Growth of Invasive Plants using an Autonomous Surface Vessel
IEEE/ICRA | 2014

Design and Construction of the DragonBall
IEEE/RSJ | 2020

Spherico: rapid prototyping a spherical robot
IEEE/RSJ | 2018

Vision-based Reactive Autonomous Navigation with Obstacle Avoidance
IEEE/ICRA | 2014

Ninja legs: Amphibious one degree of freedom robotic legs
IEEE/RSJ | 2013

Multi-Domain Monitoring of Marine Environments using a Heterogeneous Robot Team
IEEE/RSJ | 2012

MARE: Marine Autonomous Robotic Explorer
IEEE/RSJ | 2011