

Nisitha Jayatilleka (Enjay).

59 Benjamin Boake Trail, Toronto, Ontario M3J3C2. 647-839-7950 jnisitha@gmail.com

Design Portfolio: <https://seelio.com/enjay>

Education:

B.A.Sc. Mechanical Engineering, University of Toronto

GPA (Last two years): 3.17

Other Achievements:

- Dean's Honors List for the 2013-2014 Academic Year

Relevant courses taken:

- Kinematics and Dynamics of Machines – 84%
- Engineering Physics – 84%
- Mechanical Engineering Design – 75%
- Design for the Environment – 82%

Skills:

Machining and Welding: Qualified with (1) Basic and (2) Advanced courses at George Brown College.

Computer/Software: MATLAB, SOLIDWORKS, ANSYS and Simulink. Experienced with Linux systems, Github environment and OpenCV.

Experience:

University of Toronto Mechatronics Design Association (MDA). *Fall 2012 – Summer 2015:*

- **Member:** Worked as an active member of the software, electronics and mechanical teams of MDA which participates in the annual Robosub competition held in San Diego by building an autonomous robotic submarine.
- **Mechanical Team Lead.** *Fall 2014 – Summer 2015:*
 - Guided the team members to design the submarine and its peripherals. Carried out tutorials and workshops to teach necessary skills such as Solidworks and ANSYS.
 - As part of an outreach program delivered lectures and workshops to Harbord C.I. (high school) robotics club.

Undergraduate Thesis: Development of a Vision Feedback Control System to control Micro-Robots through the manipulation of a Magnetic Field. *Fall 2014 – summer 2015:*

- Reviewed the existing literature on control systems with special focus on visual feedback systems.
- Constructed a theoretical model of governing forces acting on a micro robot. The system was modeled using Simulink and set up using an Arduino Mega 2560.
- Wrote vision algorithms (in C++ and C) for tracking the micro-robot's movements using the OpenCV library and integrated with the controls system.
- Achieved movement of the micro-bot along a path.

Designing of a universal calibration block for eddy current probes used for Crack Testing in airplanes (Capstone Project – Bombardier Aerospace). *Fall 2014 – Summer 2015*

- Researched into the eddy current method and how calibration blocks can be manufactured. Various manufacturing methods of micro cracks such as EDM, laser etching and micro fluidic etching were looked into.
- Achieved to propose three (3) alternative designs which were analyzed by the Client. One (1) design was chosen based on a normalized weighted sum minimization method which satisfied the client.