**Implementation of a Self-Balancing Robot with ARM Cortex M0+**

Project Team:

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COEN 6711: Microprocessors and Applications

Concordia University

Project Proposal



**Project Title:**

Implementation of a Self-Balancing Robot with ARM Cortex M0+

**Project Repository:**

<https://github.com/hpetre/COEN-6711>

**Project Goal:**

This project is focused on designing and implementing a self-balancing robot (vertical balance) with an ARM Cortex M0+ that will move at a constant speed in a given direction until it encounters an obstacle.

**Components:**

Hardware:

* Development Board: FRDM-KL25Z
* Ultrasonic Sensor.
* Motor Driver.
* Robot Kit.
* Battery.
* Wires for connections.

Software:

**Block Diagram:**

ARM Cortex M0+

Wheel Motors

Body Physics

Sensors

Obstacle

Battery

**Schedule & tasks:**

