Project Snapshot

The purpose of this document is to provide essential preliminary information to help your project Administrator understand your project prior to the upcoming Proposal Meeting.

Please include the following sections in your Project Snapshot:

- **Project ID:** Can be found on: https://ece496v2.ece.toronto.edu/
- **Students:** List the full names of all team members.
- **Supervisor:** Include your supervisor's full name.
- **Title:** Provide a clear, specific, and concise title for your project.
- **Motivation:** Briefly explain what inspired this project or the problem it addresses.
- **Goal:** State the goal of the project in a single sentence.
- **Brief Description:** Summarize what your team plans to design, build, and test.
- **Anticipated Outcome:** Describe what the final result will be (e.g., prototype, simulation, application, etc.).

Notes:

- This document must not exceed one page.
- A sample example is provided on the next page.

Project ID: 2025**xxx** ("2025" refers to the year; "**xxx**" is your unique project team number)

Students: One Student, Two Student, Three Student, Four Student

Supervisor: Hamid Timorabadi

Title: Precision Coffee Maker with App Control and AI Assisted Brew Customization

Motivation: Coffee enthusiasts often desire more control over brewing variables such as temperature, timing, and water-to-coffee ratio, which are typically not available in standard consumer machines. This project aims to create a customizable, app-connected coffee maker that delivers consistency and user-defined brew profiles.

Goal: Design and implementation of a system that allows users to control the brewing process of coffee.

Brief Description: This project will involve developing a coffee brewing system with precise temperature control, adjustable flow rate, and a scale-based water/coffee ratio system. The device will interface with a mobile app via Bluetooth, allowing users to set brewing parameters and save custom recipes. Embedded control will be handled using a microcontroller, and the system will include sensors for temperature, weight, and flow monitoring. A touch pad interface will also be integrated for manual operation.

Anticipated Outcome: A fully functional smart coffee maker prototype with app-based control, supporting programmable brew settings and feedback on brewing performance.