# EEE3088F Design – “Design Men” Reference Document

**Introduction**

This document serves to describe the HAT code and functions used by the HAT code.

**General Information**

**Contents**

### Function Name

SystemClock\_config

### Function description

Used to setup the clock for the microcontroller.

### Parameters

None

### Return Values

None

### Function Name

MX\_ADC\_Init

### Function description

Used to setup the ADC for the microcontroller.

### Parameters

None

### Return Values

None

### Function Name

MX\_GPIO\_Init

### Function description

Used to setup the GPIO for the microcontroller.

### Parameters

None

### Return Values

None

### Function Name

MX\_I2C1\_Init

### Function description

Used to setup the I2C1 interface for the microcontroller.

### Parameters

None

### Return Values

None

### Function Name

I2C2\_Init

### Function description

Used to setup the I2C2 interface for the microcontroller.

### Parameters

None

### Return Values

None

### Function Name

showBattLevel

### Function description

Used to interpret the ADC value of the battery level and turn on a number of LEDs based on this.

### Parameters

None

### Return Values

None

### Function Name

main

### Function description

While loop to run the progam

### Parameters

None

### Return Values

None