# Hardware Assignment

PT-100 (AI-ML)

**TRAINING DATA :**

| Temperature (°C) | Voltage (V) |
|:---:|:---:|
| 31.9 | 4.617 |
| 43.5 | 4.628 |
| 54.1 | 4.637 |
| 62.7 | 4.647 |
| 74.6 | 4.657 |
| 81.6 | 4.665 |
| 81.9 | 4.662 |
| 86.6 | 4.670 |
| 91.6 | 4.673 |
| 93.8 | 4.674 |

TABLE I: Training Data

**VALIDATION DATA :**

| Temperature (°C) | Voltage (V) |
|:---:|:---:|
| 58.6 | 4.643 |
| 65.3 | 4.649 |
| 71.3 | 4.652 |
| 78.7 | 4.661 |
| 83.6 | 4.665 |

TABLE II: Validating Data

After training the **ARDIUNO**, the **Callendar-Van Dusen** equation comes out to be :

$$V(T) = 4.52171132 + \left(2.01541525 \times 10^{-3}\right) T - \left(8.15375669 \times 10^{-6}\right) T^2 \qquad (1)$$
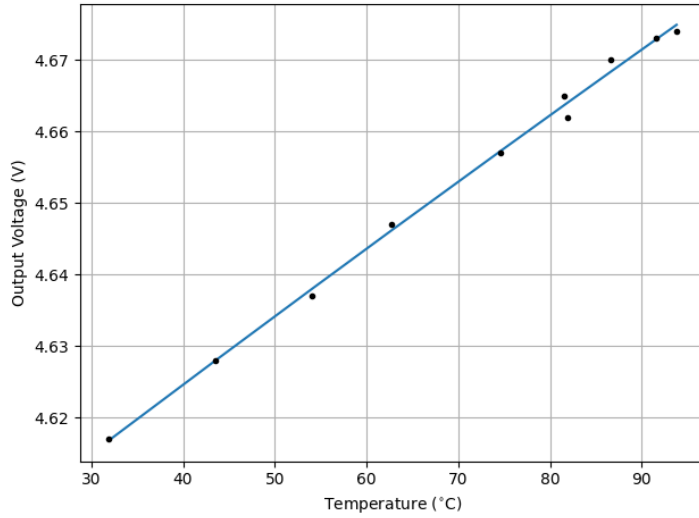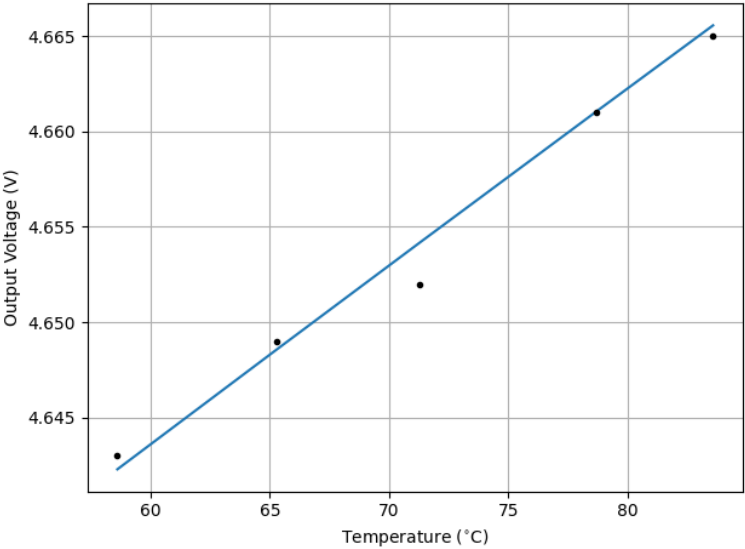
Fig. 1: Training the Model

**VALIDATION :**

Fig. 2: Validation