	Input Data			
i	x	y	x²	xy
1	0.0	0.0	0.0	0.0
2	0.3	436.0	0.09	130.8
3	0.6	904.0	0.36	542.4
4	0.9	1379.0	0.81	1241.1
5	1.2	1857.0	1.44	2228.4
6	1.51	2353.0	2.28	3553.03
7	1.8	2833.0	3.24	5099.4
8	2.1	3323.0	4.41	6978.3
9	2.58	4073.0	6.656	10508.34
10	2.68	4213.0	7.182	11290.84
11	2.8	4403.0	7.84	12328.4
12	3.0	4713.0	9.0	14139.0
Σ	19.47	30487.0	43.309	68040.01

Measured vs Fitted Values		
x	y (measured)	y (fit)
0.0	0.0	-31.15
0.3	436.0	444.363
0.6	904.0	919.876
0.9	1379.0	1395.389
1.2	1857.0	1870.902
1.51	2353.0	2362.266
1.8	2833.0	2821.929
2.1	3323.0	3297.442
2.58	4073.0	4058.263
2.68	4213.0	4216.767
2.8	4403.0	4406.973
3.0	4713.0	4723.981

Fit Results & Statistical Errors		
Parameter	Value	Uncertainty
Slope (a_1)	1585.0439	±5.0458
Intercept (a_0)	-31.1505	±9.5858
σ_y (Std. Error)	17.2731	
Δ (delta)	140.6259	

Calibration curve Linear Fit

Measured Data

Least Squares Fit:
$y = (1585.04 \pm 5.05)x + (-31.15 \pm 9.59)$

Magnetic field (Gauss)

Current (mA)
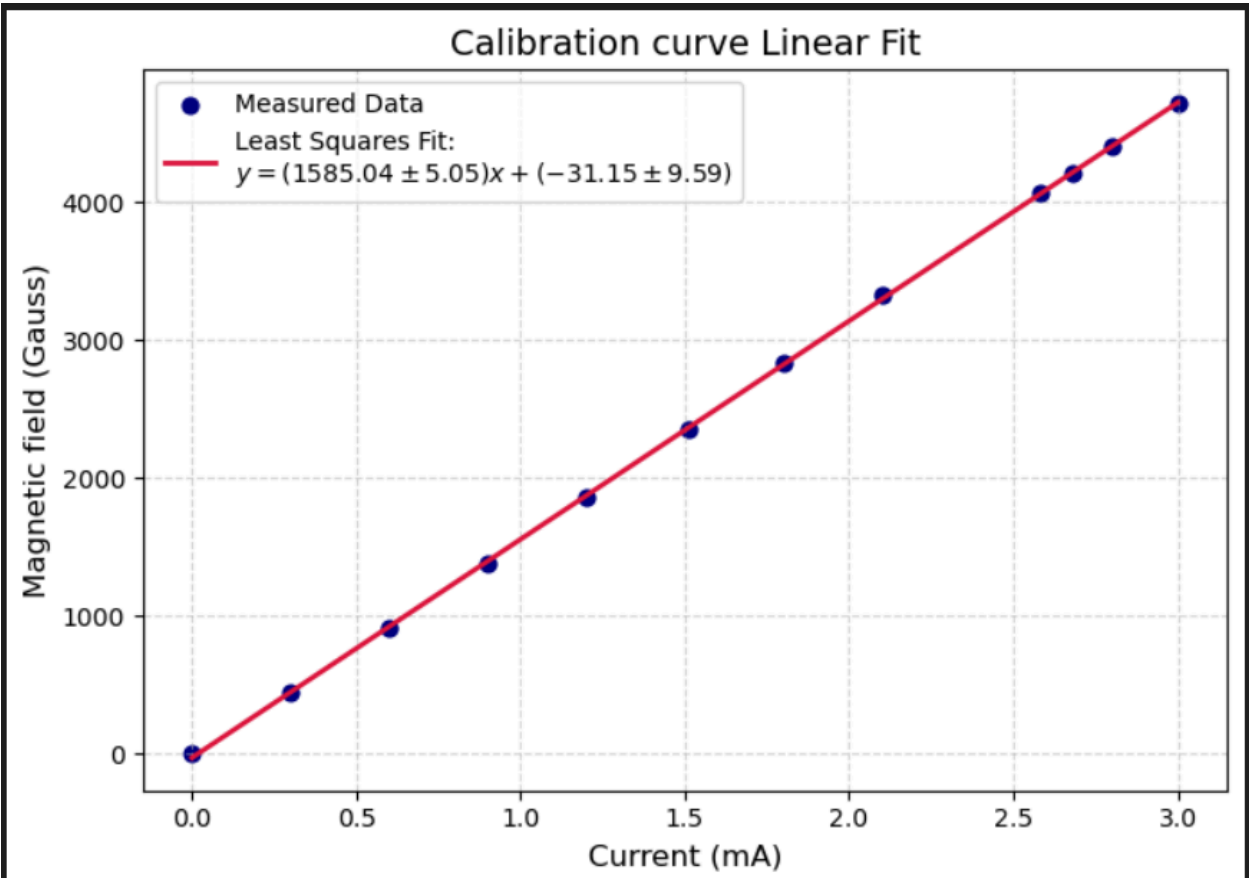
```
+-----------------------------------------------------------------+
|                          Input Data                             |
+---+---------+--------+---------------+------------------+
| i |    x    |   y    |      x²       |        xy        |
+---+---------+--------+---------------+------------------+
| 1 |  1554.0 |  -6.1  |   2414916.0   |     -9479.4      |
| 2 |  1887.0 |  -7.2  |   3560769.0   |    -13586.4      |
| 3 |  2379.0 |  -9.4  |   5659641.0   |    -22362.6      |
| 4 |  2854.0 | -11.2  |   8145316.0   |    -31964.8      |
| 5 |  3425.0 | -13.1  |  11730625.0   |    -44867.5      |
| 6 |  3806.0 | -14.4  |  14485636.0   |    -54806.4      |
| 7 |  4408.0 | -16.3  |  19430464.0   |    -71850.4      |
| 8 |  4677.0 | -17.7  |  21874329.0   |    -82782.9      |
| Σ | 24990.0 | -95.4  |  87301696.0   |   -331700.4      |
+---+---------+--------+---------------+------------------+
```

```
+---------------------------------------------+
|          Measured vs Fitted Values          |
+----------+--------------+-------------+
|    x     | y (measured) |  y (fit)    |
+----------+--------------+-------------+
|  1554.0  |     -6.1     |    -6.2     |
|  1887.0  |     -7.2     |   -7.415    |
|  2379.0  |     -9.4     |   -9.209    |
|  2854.0  |    -11.2     |  -10.941    |
|  3425.0  |    -13.1     |  -13.024    |
|  3806.0  |    -14.4     |  -14.413    |
|  4408.0  |    -16.3     |  -16.609    |
|  4677.0  |    -17.7     |   -17.59    |
+----------+--------------+-------------+
```

```
+-------------------------------------------------+
|         Fit Results & Statistical Errors        |
+-------------------+----------------+------------+
|    Parameter      |     Value      | Uncertainty|
+-------------------+----------------+------------+
|   Slope (a₁)      |    -0.0036     |   ±0.0001  |
|  Intercept (a₀)   |    -0.5329     |   ±0.2318  |
| σ_y (Std. Error)  |     0.2133     |            |
|    Δ (delta)      | 73913468.0000  |            |
+-------------------+----------------+------------+
```


Hall Voltage vs Magnetic field (n-type Si)

Measured Data

Least Squares Fit:
$y = (-0.00365 \pm 0.00007)x + (-0.53290 \pm 0.23182)$

Corrected Hall Voltage (mV) vs Magnetic field (Gauss)
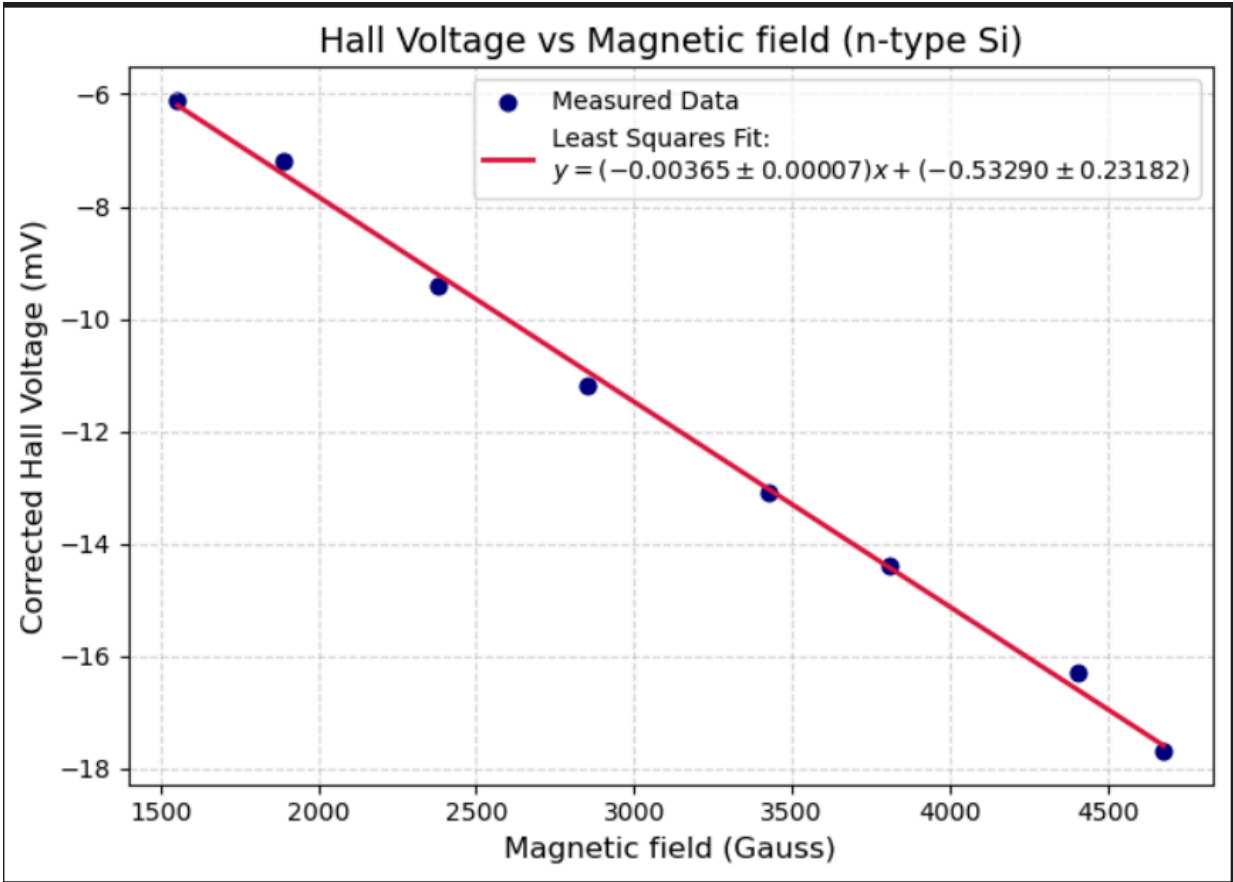
```
+-------------------------------------------------------------------+
|                           Input Data                              |
+----+--------+--------+-------------+-------------------------------+
| i  |   x    |   y    |     x²      |         xy          |
+----+--------+--------+-------------+-------------------------------+
| 1  | 444.0  |  -3.7  |   197136.0  |    -1642.8          |
| 2  | 809.0  |  -5.9  |   654481.0  |    -4773.1          |
| 3  | 1079.0 |  -7.8  |  1164241.0  |    -8416.2          |
| 4  | 1427.0 | -10.1  |  2036329.0  |   -14412.7          |
| 5  | 1887.0 | -13.3  |  3560769.0  |   -25097.1          |
| 6  | 2284.0 | -15.9  |  5216656.0  |   -36315.6          |
| 7  | 2537.0 | -17.6  |  6436369.0  |   -44651.2          |
| 8  | 2854.0 | -19.8  |  8145316.0  |   -56509.2          |
| 9  | 3171.0 | -21.9  | 10055241.0  |   -69444.9          |
| 10 | 3473.0 | -23.8  | 12061729.0  |   -82657.4          |
| 11 | 3774.0 | -25.8  | 14243076.0  |   -97369.2          |
| 12 | 4107.0 | -27.9  | 16867449.0  |  -114585.3          |
| 13 | 4424.0 | -29.9  | 19571776.0  |  -132277.6          |
| 14 | 4709.0 | -31.6  | 22174681.0  |  -148804.4          |
| Σ  |36979.0 |-255.0  |122385249.0  |  -836956.7          |
+----+--------+--------+-------------+-------------------------------+
```

```
+-------------------------------------------------+
|           Measured vs Fitted Values             |
+-----------+----------------+--------------------+
|    x      | y (measured)   | y (fit)  |
+-----------+----------------+--------------------+
|  444.0    |     -3.7       |   -3.683 |
|  809.0    |     -5.9       |   -6.097 |
| 1079.0    |     -7.8       |   -7.882 |
| 1427.0    |    -10.1       |  -10.184 |
| 1887.0    |    -13.3       |  -13.226 |
| 2284.0    |    -15.9       |  -15.851 |
| 2537.0    |    -17.6       |  -17.524 |
| 2854.0    |    -19.8       |   -19.62 |
| 3171.0    |    -21.9       |  -21.717 |
| 3473.0    |    -23.8       |  -23.714 |
| 3774.0    |    -25.8       |  -25.704 |
| 4107.0    |    -27.9       |  -27.907 |
| 4424.0    |    -29.9       |  -30.003 |
| 4709.0    |    -31.6       |  -31.888 |
+-----------+----------------+--------------------+
```

```
+----------------------------------------------------+
|        Fit Results & Statistical Errors            |
+-----------------+----------------+-----------------+
|    Parameter    |     Value      |  Uncertainty    |
+-----------------+----------------+-----------------+
|   Slope (a₁)    |    -0.0066     |    ±0.0000      |
| Intercept (a₀)  |    -0.7470     |    ±0.0845      |
| σ_y (Std. Error)|    0.1421      |                 |
|   Δ (delta)     | 345947045.0000 |                 |
+-----------------+----------------+-----------------+
```


Hall Voltage vs Magnetic field (n-type Ge)

- Measured Data
- Least Squares Fit:
  $y = (-0.00661 \pm 0.00003)x + (-0.7470 \pm 0.0845)$

Corrected Hall Voltage (mV) vs Magnetic field (Gauss)
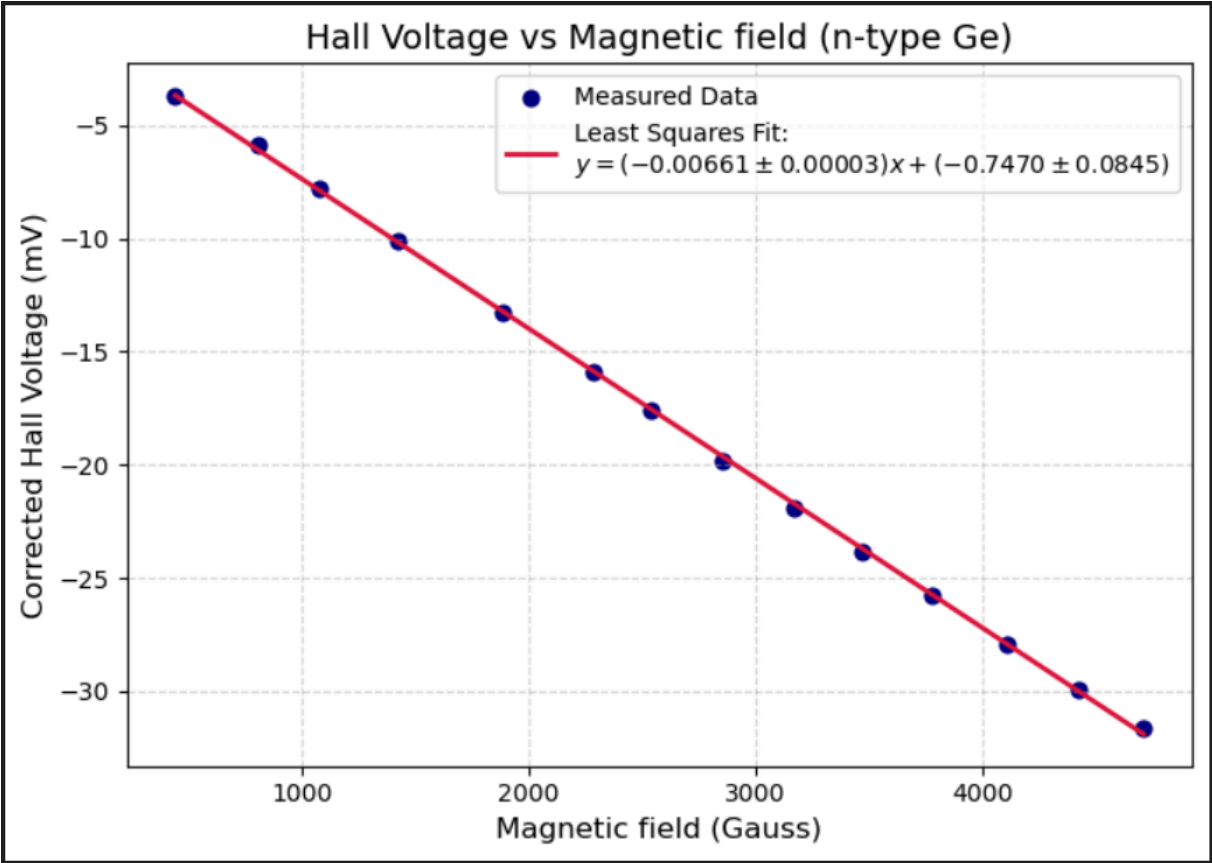
```
+-------------------------------------------------+
|                   Input Data                    |
+----+--------+-------+-------------+--------------+
| i  |   x    |   y   |     x²      |      xy      |
+----+--------+-------+-------------+--------------+
| 1  |  365.0 |  5.0  |   133225.0  |     1825.0   |
| 2  |  635.0 |  7.4  |   403225.0  |     4699.0   |
| 3  |  936.0 | 10.2  |   876096.0  |     9547.2   |
| 4  | 1269.0 | 13.4  |  1610361.0  |    17004.6   |
| 5  | 1634.0 | 17.1  |  2669956.0  |    27941.4   |
| 6  | 2030.0 | 20.9  |  4120900.0  |    42427.0   |
| 7  | 2220.0 | 23.5  |  4928400.0  |    52170.0   |
| 8  | 2395.0 | 25.0  |  5736025.0  |    59875.0   |
| 9  | 2569.0 | 26.6  |  6599761.0  |    68335.4   |
| 10 | 2759.0 | 28.3  |  7612081.0  |    78079.7   |
| 11 | 3013.0 | 30.5  |  9078169.0  |    91896.5   |
| 12 | 3219.0 | 32.3  | 10361961.0  |   103973.7   |
| 13 | 3377.0 | 33.6  | 11404129.0  |   113467.2   |
| 14 | 3568.0 | 35.0  | 12730624.0  |   124880.0   |
| 15 | 3964.0 | 38.2  | 15713296.0  |   151424.8   |
| 16 | 4265.0 | 40.5  | 18190225.0  |   172732.5   |
| 17 | 4487.0 | 42.1  | 20133169.0  |   188902.7   |
| 18 | 4677.0 | 43.4  | 21874329.0  |   202981.8   |
| Σ  |47382.0 |473.0  |154175932.0  |  1512163.5   |
+----+--------+-------+-------------+--------------+
```

```
+-------------------------------------------+
|          Measured vs Fitted Values        |
+----------+---------------+----------------+
|    x     | y (measured)  |  y (fit)       |
+----------+---------------+----------------+
|  365.0   |      5.0      |    5.717       |
|  635.0   |      7.4      |    8.165       |
|  936.0   |     10.2      |   10.895       |
| 1269.0   |     13.4      |   13.915       |
| 1634.0   |     17.1      |   17.225       |
| 2030.0   |     20.9      |   20.816       |
| 2220.0   |     23.5      |   22.539       |
| 2395.0   |     25.0      |   24.126       |
| 2569.0   |     26.6      |   25.703       |
| 2759.0   |     28.3      |   27.426       |
| 3013.0   |     30.5      |   29.73        |
| 3219.0   |     32.3      |   31.598       |
| 3377.0   |     33.6      |   33.031       |
| 3568.0   |     35.0      |   34.763       |
| 3964.0   |     38.2      |   38.354       |
| 4265.0   |     40.5      |   41.083       |
| 4487.0   |     42.1      |   43.097       |
| 4677.0   |     43.4      |   44.82        |
+----------+---------------+----------------+
```

```
+-------------------------------------------------+
|         Fit Results & Statistical Errors        |
+-------------------+------------------+-----------+
|    Parameter      |      Value       |Uncertainty|
+-------------------+------------------+-----------+
|   Slope (a₁)      |      0.0091      |  ±0.0001  |
| Intercept (a₀)    |      2.4068      |  ±0.4256  |
| σ_y (Std. Error)  |      0.7892      |           |
|    Δ (delta)      | 530112852.0000   |           |
+-------------------+------------------+-----------+
```


Hall Voltage vs Magnetic field (p-type Ge)

Measured Data
Least Squares Fit:
$y = (0.00907 \pm 0.00015)x + (2.4068 \pm 0.4256)$

Corrected Hall Voltage (mV)
Magnetic field (Gauss)
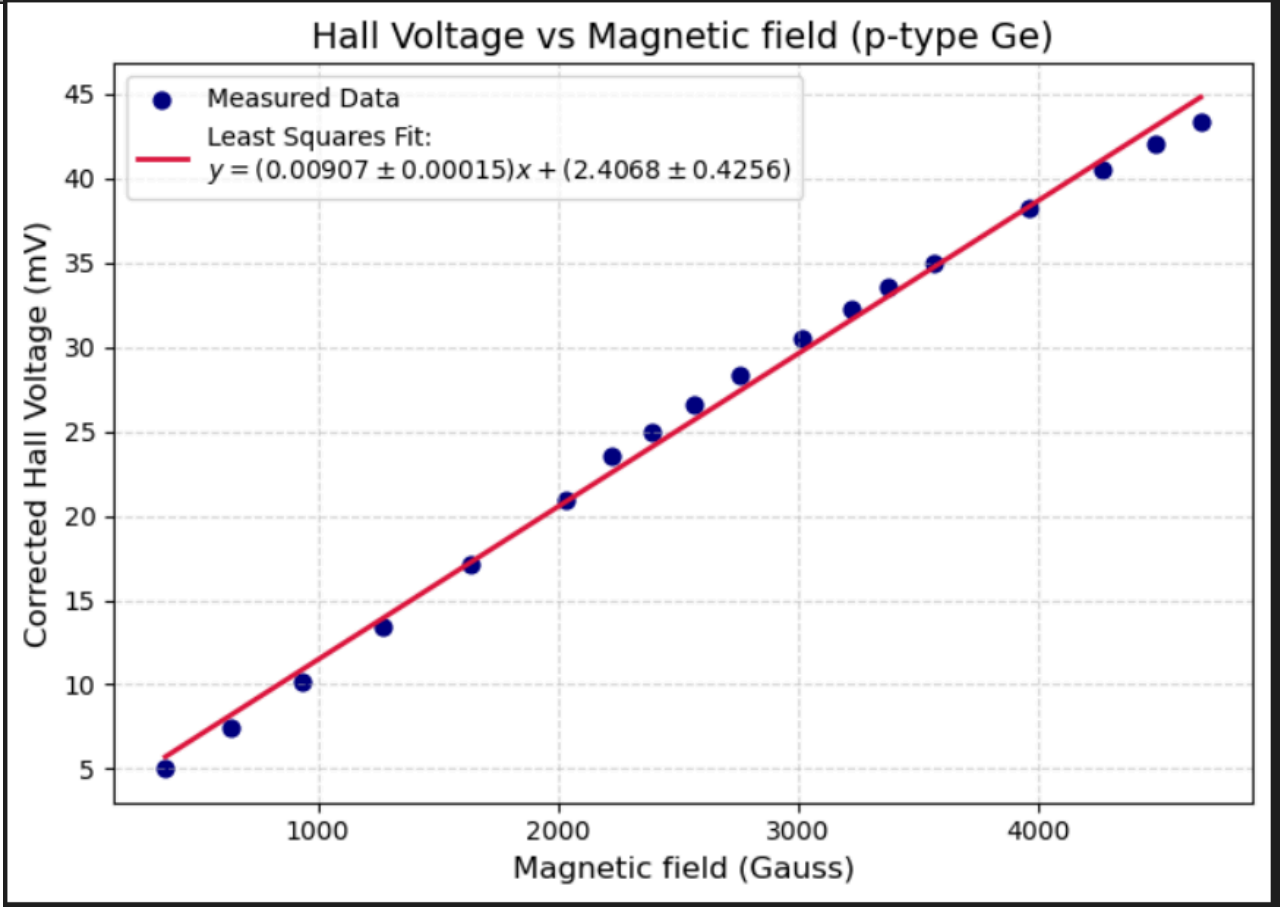
Hall Coefficient vs Temperature