

## Given Data

RStudio Source Editor

Startups\_Data x

Filter

	Startups	Research	Patents	Duration
1	1	145.5236	8	23
2	1	237.5212	16	23
3	1	146.9840	12	20
4	1	304.2250	11	25
5	12	343.4238	9	32
6	0	10.7120	0	7
7	9	26.3600	3	22
8	0	14.8700	0	8
9	10	229.2800	21	16
10	3	139.2837	15	21
11	3	302.6129	9	38
12	10	640.0000	59	26
13	5	668.2275	54	29
14	1	174.1091	13	23
15	4	102.2090	8	13
16	7	678.1842	32	22
17	0	13.2000	1	9
18	1	16.1920	4	13
19	0	30.7770	3	9
20	3	390.9652	3	23
21	0	43.2491	2	12
22	3	206.5418	11	12
23	5	79.8832	5	12
24	0	144.9570	12	15
25	9	536.4125	46	18
...	...	...	...	...

Showing 1 to 26 of 143 entries, 4 total columns

## Console Output:

```
Console Terminal Render Background Jobs
R 4.3.2 ~ /
> View(Startups_Data)
>
> model <- lm(Startups ~ Research + Patents + Duration, data = Startups_Data)
>
> summary(model)

Call:
lm(formula = Startups ~ Research + Patents + Duration, data = Startups_Data)

Residuals:
    Min       1Q   Median       3Q      Max
-7.5385 -1.5571 -0.5251  1.1716 16.2857

Coefficients:
            Estimate Std. Error t value Pr(>|t|)
(Intercept)  0.419036   0.512386   0.818   0.4149
Research     0.008674   0.001216   7.133 4.92e-11 ***
Patents      0.051661   0.019895   2.597  0.0104 *
Duration     -0.019437   0.023594  -0.824   0.4115
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 3.137 on 139 degrees of freedom
Multiple R-squared:  0.7168,    Adjusted R-squared:  0.7106
F-statistic: 117.2 on 3 and 139 DF,  p-value: < 2.2e-16

>
> new_data <- data.frame(Research = 120, Patents = 8, Duration = 20)
> predicted_startups <- predict(model, newdata = new_data)
> cat("Predicted number of startups:", predicted_startups)
Predicted number of startups: 1.484413
> |
```