Python Code

```
import pandas as pd
import numpy as np
from sklearn.datasets import load_iris

# Load Iris dataset
iris = load_iris()
df = pd.DataFrame(data=iris.data, columns=iris.feature_names)
df['species'] = pd.Categorical.from_codes(iris.target, iris.target_names)
df.columns = ['sepal_length', 'sepal_width', 'petal_length', 'petal_width', 'species']

# Introduce missing values artificially
np.random.seed(42)
for col in ['sepal_length', 'sepal_width', 'petal_length', 'petal_width']:
    missing_indices = np.random.choice(df.index, size=5, replace=False)
    df.loc[missing_indices, col] = np.nan

# Fill missing values using linear interpolation only on numeric columns
numeric_cols = df.select_dtypes(include=[np.number]).columns
df[numeric_cols] = df[numeric_cols].interpolate(method='linear')
```

Sample Data Before and After Filling Missing Values

	sepal_length_before	sepal_width_before	petal_length_before	petal_width_before	species_before	sepal_length_after	sepal_width_after	petal_length_after	petal_width_after	species_after
0	5.1	3.5	1.4	0.2	setosa	5.1	3.5	1.4	0.2	setosa
1	4.9	3.0	1.4	0.2	setosa	4.9	3.0	1.4	0.2	setosa
2	4.7	3.2	1.3	0.2	setosa	4.7	3.2	1.3	0.2	setosa
3	4.6	3.1	1.5	0.2	setosa	4.6	3.1	1.5	0.2	setosa
4	5.0	3.6	1.4	0.2	setosa	5.0	3.6	1.4	0.2	setosa
5	5.4	3.9	1.7	0.4	setosa	5.4	3.9	1.7	0.4	setosa
6	4.6	3.4	1.4	0.3	setosa	4.6	3.4	1.4	0.3	setosa
7	5.0	3.4	1.5	0.2	setosa	5.0	3.4	1.5	0.2	setosa

8	4.4	2.9	1.4	0.2	setosa	4.4	2.9
1.4	0.2	setosa					
9	4.9	3.1	1.5	0.1	setosa	4.9	3.1
1.5	0.1	setosa					