```
import matplotlib.pyplot as plt
import numpy as np

# Define environment
start = [0, 0]
goal = [8, 8]
obstacles = np.array([[2, 2], [3, 5],
[5, 3], [6, 6]])
path = np.array([
    [0, 0], [1, 1], [2, 1], [3, 2], [4,
3],
    [5, 4], [6, 5], [7, 6], [8, 8]
])

# Plot setup
plt.figure(figsize=(7, 7))
plt.plot(path[:, 0], path[:, 1], 'b--o',
label='Planned Path')
plt.scatter(*start, color='green',
s=100, label='Start')
plt.scatter(*goal, color='red', s=100,
label='Goal')
plt.scatter(obstacles[:, 0],
obstacles[:, 1], color='black', s=120,
label='Obstacles')

# Formatting
plt.grid(True)
plt.xlim(-1, 10)
plt.ylim(-1, 10)
plt.xlabel('X Position')
plt.ylabel('Y Position')
plt.title('Autonomous Vehicle Path
Planning')
plt.legend()
plt.show()
```