

# 第三周周报

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## 本周完成工作

- 学习Q-Learning，尝试使用Q-Learning结合openai的gymnasium库训练智能体通关FrozenLake游戏

The screenshot shows a Visual Studio Code (VS Code) interface. The left sidebar displays a project structure under 'Laboratory'. The main editor area has three tabs: 'gym\_test.py', 'frozen\_lake.py' (which is currently active), and 'registration.py'. The 'frozen\_lake.py' tab contains Python code for interacting with a FrozenLake environment. The code uses gymnasium's gym API to reset the environment, choose actions, and step through episodes. A terminal window at the bottom shows the output of running the 'frozen\_lake.py' script, displaying a sequence of moves and rewards. To the right of the terminal, a small window titled 'Frozen Lake' shows the 4x4 grid world with four frozen lakes and a single agent starting at the bottom-right corner.

```
64     map_name="4x4",
65     is_slippery=False,
66     render_mode="human") # 启用渲染
67
68 for test_episode in range(10):
69     state, info = env.reset()
70     done = False
71     print(f"测试 {test_episode + 1}:")
72     while not done:
73         action = np.argmax(Q[state, :])
74         state, reward, terminated, truncated, info = env.step(action)
75         done = terminated or truncated
76         env.render()
77         print()
78
79 env.close()
```

- 继续进行论文阅读 Li, Y. Deep Reinforcement Learning: An Overview. arXiv:1812.05551, 2017.

## 下周学习规划

- 阅读学习论文：MKG-FENN: A Multimodal Knowledge Graph Fused End-to-End Neural Network for Accurate Drug–Drug Interaction Prediction
- 学习神经网络