

When you try to step on the jetty, a force needs to be exerted on you, otherwise you can't move forward. The way you achieve that: you push with your back foot on the boat. And as a result of Newton 3, the boat will push back, but the force from the boat on you is forward directed. That is exactly what you need!

However, while you push, the boat will move backwards due to the force you exert on it. Consequently, your point of contact with the boat shifts away from the jetty. Either you let the boat go and no force from the boat is acting on you. Now gravity will do its work and if your forward velocity is not sufficient, you will not reach the jetty.

Or your foot will try to follow the boat and that requires a force to the wrong direction acting on you.

Pushing harder seems an option: your forward velocity might increase more. However, the boat will also be pushed harder and moves quicker away from you. Consequently, the time interval of contact with the boat decreases. Thus, with Newton 2: dp = Fdt your increase in velocity due to the larger force might be compensated by a smaller duration that the force can do so. And you may still end up in the water.