

A Sample Dialogs

Extended System	Contrast System
<p><i>User:</i> I want to find a Hunan restaurant.</p> <p><i>System:</i> “Hunan King” is a nice Hunan restaurant.</p> <p><i>User:</i> Is this restaurant located in CBD?</p> <p><i>System:</i> “Human King” is located in Wangjing.</p> <p><i>User:</i> I want a restaurant in CBD.</p> <p><i>System:</i> “Wang Xiang Lou” serves Hunan food and is located in CBD.</p> <p><i>User:</i> How much does it cost per person?</p> <p><i>System:</i> The average cost is 80 CNY.</p> <p><i>User:</i> Bye.</p> <p><i>System:</i> Bye.</p>	<p><i>User:</i> Hi, I want to eat Anhui cuisine.</p> <p><i>System:</i> “Mandarin Fish” is a nice restaurant and serves Anhui food.</p> <p><i>User:</i> Is this restaurant located in College Road?</p> <p><i>System:</i> Where do you want to go?</p> <p><i>User:</i> College Road.</p> <p><i>System:</i> “Anhui Hotel” is a nice place in College Road and serves Anhui food.</p> <p><i>User:</i> Is the average cost less than 100 CNY?</p> <p><i>System:</i> The average cost of “Anhui Hotel” is 78 CNY.</p> <p><i>User:</i> Thanks.</p> <p><i>System:</i> You are welcome.</p>
<p><i>User:</i> Can you find a restaurant for me?</p> <p><i>System:</i> What kind of food do you like?</p> <p><i>User:</i> Western food.</p> <p><i>System:</i> “Germy” is an excellent restaurant and serves Western food.</p> <p><i>User:</i> Is the average cost less than 300 CNY?</p> <p><i>System:</i> The average cost of “Germy” is 240 CNY.</p> <p><i>User:</i> Can you tell me the address?</p> <p><i>System:</i> Ok. “Germy” is located in Olympic Village.</p> <p><i>User:</i> Bye.</p> <p><i>System:</i> Bye.</p>	<p><i>User:</i> Hi, I want to eat buffets with the average cost around 140 CNY.</p> <p><i>System:</i> “Do Eat” is a nice cafeteria and the average cost is 128 CNY.</p> <p><i>User:</i> Is this restaurant near CBD?</p> <p><i>System:</i> Yes, it’s located in CBD.</p> <p><i>User:</i> Can you tell me the phone number?</p> <p><i>System:</i> The phone number is 18397014610.</p> <p><i>User:</i> Thanks.</p> <p><i>System:</i> Bye.</p>

Table 6: Sample dialogs of the extended system and contrast system in the simulated evaluation. The extended system learns how to deal with new user actions from logic rules. And the dialog policy of contrast system is gained from exploring the environment. As a result, the contrast system learns a more flexible policy than the extended system. But the definition of “Satis.” has a bias to logic rules. So, the “Satis.” of the extended system is slightly higher than the contrast system.