

## Supplementary Material

Supplement Table 1. Examined prompt headers for zero-shot ChatGPT. Sample variations of ChatGPT outputs are shown. The selected prompt header is bolded.

| Prompt Header   | Sample Prompt Content   | Sample Output 1  | Sample Output 2  | Sample Output 3   |
|---|---|--|--|---|
| <b>Here I have a few paragraphs. Please extract the food entities from each paragraph. List out all food entities as a new line. Paragraph number should be listed to indicate where the entity was extracted from. Do not write anything in addition to extracted food terms.</b>  |   | <ol style="list-style-type: none"> <li>Turkey salad, pickle saltine cracker, mayonnaise</li> <li>pizza</li> </ol>                          | <ol style="list-style-type: none"> <li>Turkey</li> <li>Salad</li> <li>Pickle</li> <li>Saltine cracker</li> <li>Mayonnaise</li> <li>Pizza</li> </ol>  | <ul style="list-style-type: none"> <li>Turkey</li> <li>Salad</li> <li>Pickle</li> <li>Saltine cracker</li> <li>Mayonnaise</li> <li>Pizza</li> </ul> |
| <p>I want to identify the food entities from a set of paragraphs below. Here are some instructions:</p> <p>1) Repetitive food entities should be listed out multiple times.</p> <p>2) Each entity should be listed on a new line.</p> <p>3) After extracting from one paragraph, add a new line to the last identified food entity to indicate end.</p> | <p>turkey salad pickle saltine cracker, turkey mayonnaise mixed</p> <p>pizza, pizza</p> | <p>turkey</p> <p>salad</p> <p>pickle</p> <p>saltine cracker</p> <p>mayonnaise</p> <p>pizza</p> <p>pizza</p>                                | <ol style="list-style-type: none"> <li>turkey</li> <li>salad</li> <li>pickle</li> <li>saltine cracker</li> <li>mayonnaise</li> <li>mixed</li> <li>pizza</li> <li>pizza</li> </ol>              |   |
| Identify the food terms from the set of paragraphs below. Paragraphs are separated by new line.   |   | <ol style="list-style-type: none"> <li>turkey salad</li> <li>pickle</li> <li>saltine cracker</li> <li>mayonnaise</li> <li>pizza</li> </ol> | <ol style="list-style-type: none"> <li>The turkey salad includes a combination of turkey, pickles, and saltine crackers, all mixed together with mayonnaise.</li> <li>Pizza, pizza.</li> </ol> | <p>Paragraphs contain food terms, turkey salad, pickle, saltine cracker, turkey mayonnaise mixed, and pizza.</p>                                    |

Supplement Table 2. Food entity prediction results. Results in rows TP, FP, FN, and partial are counts of identified entities within each category. The highest score across the three methods for each metric is bolded.

| Data           | 1000 FoodBase Recipes |              | Patient-generated Meal Records |              |
|----------------|-----------------------|--------------|--------------------------------|--------------|
| Method         | FoodIE                | ChatGPT      | FoodIE                         | ChatGPT      |
| True Positive  | <b>9167</b>           | 8077         | 1236                           | <b>5723</b>  |
| False Positive | <b>1244</b>           | 825          | <b>2303</b>                    | 2177         |
| False Negative | 4067                  | <b>5602</b>  | <b>8734</b>                    | 4295         |
| Partial        | <b>610</b>            | 165          | <b>148</b>                     | 100          |
| Precision      | 0.881                 | <b>0.882</b> | 0.349                          | <b>0.724</b> |
| Recall         | 0.697                 | <b>0.708</b> | 0.124                          | <b>0.571</b> |
| F1             | 0.775                 | <b>0.786</b> | 0.183                          | <b>0.639</b> |