Further consideration:

* Filters: number of ingredients, preparation time, nutrients, number of steps
* Cooks might also want recommendations on complementary ingredients, “what goes well with salmon?”
* make a given dish healthier by substituting out an ingredient for one that has a comparable ﬂavor proﬁle but is lower calorie, lower fat etc.
* Jaccard - similarity
  + First, each ingredient is considered equally important, which may not correspond to the reality.
* Word2Vec – spomenúť
* Porovnať s Netflixom
* CF – cold start problem
  + Combining elements of content-based filtering until users have indicated enough preferences that collaborative filtering can be used is a common way to address this problem
  + Similarly, Martinez et al. [29] require new users to ﬁrst rate 20 restaurants.   
    (*A georeferenced hybrid recommender system for restaurants*)

**01 Hybrid Reciprocal Recommender Systems - James Neve**

- user to user , hybrid CF + CB

- Cookpad, a popular recipe

- sharing website in countries such as Japan, Taiwan and Indonesia

1. **SmartRecepies: Towards Cooking and Food Shopping Integration via Mobile – Starychfojtu**

* Websites: allrecipes.com, supercook.com, myfridgefood.com
* Although the dataset could be manually cleaned, we kept it as is and instead aimed on utilizing recommending methods that can overcome these inconsistencies
* The dataset of over 10000 recipes seemed sufficiently large for the evaluation purposes
* For instance, user preferences on both explicit (e.g. liked/disliked ingredients, cooking skills) and latent features could be incorporated into the recommendations.

**03 A SURVEY OF FOOD RECOMMENDERS – Anderson**

* Urbanspoon developed an app with an early and innovative UI for restaurant recommendations (Figure 1). Users set a neighborhood, a cuisine and price bracket and then shook the phone to spin the wheels and generate a recommended restaurant.
* Freyne and Berkovsky [10] built a content-based recommender by passing the ratings of recipes down to the ingredients themselves, weighted equally.

**IoT, Alexa, smart fridge:**

In terms of trends, I suspect that we will increasingly see voice being used an interface, especially in the kitchen. As users get more used to voice interaction, and as home assistants, such as Siri, Alexa, and Google Home, become more common, it will likely become more natural to ask "Alexa, what should I eat for lunch?" This is especially true as kitchen appliances get smarter. Imagine when a fridge knows what food it contains and when it expires. Coupled with a recommender service, it can then suggest what to make. Or, a service can recommend a recipe, consult with the fridge,

and order the remaining needed ingredients from a grocery delivery service. Some apps, such as Zopingo already incorporate recommended recipe to grocery delivery. Thus, the notion of a recommended, highly personalized smart meal kit, delivered to your door becomes a real possibility.