

SKKERepository

: SKK Economics Repository

- Final Project Report -

2019311821 Sungha Kang

Quiz 1. 논문제목 클릭 시 상세 논문페이지로 이동하되, 새 창에 열릴 수 있도록 하시오.

```
<!-- table -->
<div class="container mt-5">
  {% if 1 %}
  <span class="h2" style="color:#10467a">Recent Addition</span>
  <table class="table table-striped mt-2">
    <thead class="table-dark">
      <tr>
        <th scope="col">No.</th>
        <th scope="col">Title</th>
        <th scope="col">Author</th>
        <th scope="col">Subject</th>
      </tr>
    </thead>
    <tbody>
      {% for meta in articles %}
      <tr>
        <td scope="row">{{forloop.counter}}</td>
        <td><a href = {{meta.doi}} target="_blank">{{meta.title}}</a></td>
        <td>{{meta.author}}</td>
        <td>{{meta.subject1}}</td>
      </tr>
      {% endfor %}
    </tbody>
  </table>
  {% else %}
  <p class="h5">
    empty
  </p>
  {% endif %}
</div>
```

- templates/home/index.html
- 동일한 doi 정보의 파일로 링크시킨다.
href = {{meta.doi}}
- 그 후, 링크정보를 그 title에 바로 부여하지 않고, 새로운 윈도우나 탭에서 오픈하도록 설정하였다.
target = "_blank"

Quiz 1. 논문제목 클릭 시 상세 논문페이지로 이동하되, 새 창에 열릴 수 있도록 하시오.

Recent Addition

No.	Title	Author	Subject
1	Title: Bayesian Opponent Modeling in Multiplayer Imperfect-Information Games	Authors: Sam Ganzfried, Kevin A. Wang, Max Chiswick	Theoretical Economics
2	Title: Sequential Cursed Equilibrium	Authors: Shani Cohen, Shengwu Li	Theoretical Economics
3	Title: Price & Choose	Authors: Federico Echenique, Matías Núñez	Theoretical Economics
4	Title: A Characterization of Maximum Nash Welfare for Indivisible Goods	Authors: Warut Suksompong	Theoretical Economics
5	Title: Utility-Based Communication Requirements for Stable Matching in Large Markets	Authors: Naveen Durvasula	Theoretical Economics



- 해당 Title 제목을 클릭하면 해당 논문 정보로 이동 가능하다.



arXiv > cs > arXiv:2212.06027

Search...
Help | Advance

Computer Science > Computer Science and Game Theory

[Submitted on 12 Dec 2022]

Bayesian Opponent Modeling in Multiplayer Imperfect-Information Games

Sam Ganzfried, Kevin A. Wang, Max Chiswick

In many real-world settings agents engage in strategic interactions with multiple opposing agents who can employ a wide variety of strategies. The standard approach for designing agents for such settings is to compute or approximate a relevant game-theoretic solution concept such as Nash equilibrium and then follow the prescribed strategy. However, such a strategy ignores any observations of opponents' play, which may indicate shortcomings that can be exploited. We present an approach for opponent modeling in multiplayer imperfect-information games where we collect observations of opponents' play through repeated interactions. We run experiments against a wide variety of real opponents and exact Nash equilibrium strategies in three-player Kuhn poker and show that our algorithm significantly outperforms all of the agents, including the exact Nash equilibrium strategies.

Subjects: [Computer Science and Game Theory \(cs.GT\)](#), [Artificial Intelligence \(cs.AI\)](#), [Multiagent Systems \(cs.MA\)](#), [Theoretical Economics \(econ.TH\)](#)

Cite as: [arXiv:2212.06027 \[cs.GT\]](#)
(or [arXiv:2212.06027v1 \[cs.GT\]](#) for this version)
<https://doi.org/10.48550/arXiv.2212.06027>

Submission history

From: Sam Ganzfried [[view email](#)]
[v1] Mon, 12 Dec 2022 16:48:53 UTC (90 KB)

Quiz 2. Subject2를 이용하여 보다 이용자의 관심에 맞는 화면을 출력해주시시오.

```
{% extends "base.html" %}
{% block contents %}

<div class="container">
  <div class="row mt-5">
    <div class="col-12 text-center" style="color:#FF6C0F">
      <h1>
        ADVANCED BROWSING
      </h1>
    </div>
  </div>
  {% if user_id %}
  <div class="row mt-5">
    <div class="col-12">
      <h4 class="text-info" style="color:#10467a">
        Recent Addition on {{user_id}}'s interested topic "{{userinfo.subject1}}"
      </h4>
    </div>
  </div>
  {% endif %}
  <div class="container mt-3">
    <table class="table table-striped">
      <thead class="table-dark">
        <tr>
          <th scope="col">No.</th>
          <th scope="col">Title</th>
          <th scope="col">Author</th>
          <th scope="col">Subject</th>
        </tr>
      </thead>
      <tbody>
        {% for meta in articles %}
        <tr>
          <td scope="row">{{forloop.counter}}</td>
          <td><a href = {{meta.doi}} target="_blank">{{meta.title}}</a></td>
          <td>{{meta.author}}</td>
          <td>{{meta.subject1}}</td>
        </tr>
        {% endfor %}
      </tbody>
    </table>
  </div>
</div>
{% endblock %}
```

- templates/article/subject.html
- “Advanced Browsing” tab
(교안에서는 ‘subject’ tab을 이용하였음)
의 템플릿은 기존 home의 index.html과
동일한 구조를 취하고 있다.

Quiz 2. Subject2를 이용하여 보다 이용자의 관심에 맞는 화면을 출력해주시오.

```
from django.db.models import Q

def subject(request) :
    data_dic={}
    data_dic["user_id"] = request.session.get("user")

    #articlereg(request)

    if data_dic["user_id"] :

        data_dic["userinfo"] = Member.objects.get(memberID = data_dic["user_id"])

        print(Member.objects.filter(memberID = data_dic["user_id"]).values())
        data_dic["articles"] = Article.objects.filter(Q(subject1 =data_dic["userinfo"].subject1)
            | Q(subject2 = data_dic["userinfo"].subject2))[:20]
        return render(request, 'article/subject.html', data_dic)

    else :
        data_dic["articles"] = Article.objects.all()[::-1][:20]
        print(data_dic["articles"])
        return render(request, 'article/subject.html', data_dic)
```

- mywebsite/article/views.py
- SQL 질의문의 where 절에 해당하는 기능을 온전히 수행하기 위해서 Django의 Q 객체를 이용하였다. Q라는 변수 안에 조건들을 넣어주고 마지막 filter에 그 변수를 넣어서 쿼리를 한번만 수행하도록 설정해주면 된다. Subject1과 Subject2를 모두 반영한 결과를 보여주기 위해 OR (|)를 사용하였다.

Quiz 2. Subject2를 이용하여 보다 이용자의 관심에 맞는 화면을 출력해주시요.

The screenshot shows the SKKERepository website interface. At the top, there is a navigation bar with the logo and name 'SKKERepository Sungkyunkwan Economics Repository'. To the right of the logo are several menu items: 'SKKU dCOLLECTION', 'DATA RESOURCE GUIDES', 'THESES SUBMISSION', 'ANNOUNCEMENT', 'FAQ', and 'ADVANCED BROWSING'. The user 'sungha' is logged in, indicated by a dropdown arrow. The main heading is 'ADVANCED BROWSING'. Below it, a sub-heading reads 'Recent Addition on sungha's interested topic "Theoretical Economics" and "Machine Learning"'. A table lists 8 recent additions with columns for 'No.', 'Title', 'Author', and 'Subject'.

No.	Title	Author	Subject
1	Title: Identification of Unobservables in Observations	Authors: Yingyao Hu	Econometrics
2	Title: Bounded arbitrage and nearly rational behavior	Authors: Leandro Nascimento	Theoretical Economics
3	Title: Respecting priorities versus respecting preferences in school choice: When is there a trade-off?	Authors: Estelle Cantillon, Li Chen, Juan S. Pereyra	Theoretical Economics
4	Title: Which products activate a product? An explainable machine learning approach	Authors: Massimiliano Fessina, Giambattista Alborà, Andrea Tacchella, Andrea Zaccaria	General Economics
5	Title: Regret Minimization with Dynamic Benchmarks in Repeated Games	Authors: Ludovico Crippa, Yonatan Gur, Bar Light	Theoretical Economics
6	Title: Screening with Persuasion	Authors: Dirk Bergemann, Tibor Heumann, Stephen Morris	Theoretical Economics
7	Title: An Ellsberg paradox for ambiguity aversion	Authors: Christoph Kuzmics, Brian W. Rogers, Xiannong Zhang	Theoretical Economics
8	Title: Neighborhood Adaptive Estimators for Causal Inference under Network Interference	Authors: Alexandre Belloni, Fei Fang, Alexander Volfvsky	Econometrics

- Sungha의 관심 주제는 Theoretical Economics(subject1)와 Machine Learning(subject2)이다. 각 논문은 복수의 주제 설정이 가능한데, 해당 화면에 표시된 논문은 이 두 주제를 포함하고 있는 논문들이다.
- 로그인 없이도 Advanced Browsing tab 접속이 가능한데, 이 경우에는 복수 주제의 Recent Addition이 제시된다.

Description for Homepage : Navbar



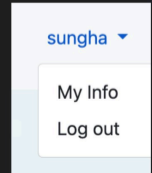
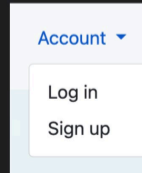
SKKERepository

Sungkyunkwan Economics Repository

SKKU dCOLLECTION DATA RESOURCE GUIDES THESES SUBMISSION ANNOUNCEMENT FAQ ADVANCED BROWSING

Account ▾

- 해당 Navbar의 Organization은 Task-oriented 방식을 취하고 있다. SKKU Repository, Data Resource, Theses Submission 라는 Repository의 주 기능 3가지를 Navbar에 삽입하여 바로 링크로 접속할 수 있게끔 하였다. Announcement와 FAQ도 함께 확인 가능하다.
- “SKKERepository” 로고 탭을 눌러 웹사이트의 어느 세부 페이지에서든 홈페이지로 회귀가 가능하도록 링크 정보를 추가하였다.
- 자신의 관심 주제와 관련한 논문은 Advanced Browsing tab에서 확인 가능하다.
- Login과 Sign up은 드롭박스를 사용하였고, 로그인 후 웹사이트 이용시 사진 속 “Account”는 해당 유저의 아이디로 변경되어 드롭박스에서 My Info 확인과 로그아웃이 가능하다.



Description for Homepage : Navbar

- templates/base.html

```
<nav class="navbar navbar-expand-lg bg-light">
  <div class="container-fluid">

    <button
      class="navbar-toggler" type="button"
      data-bs-toggle="collapse" data-bs-target="#navbarTogglerDemo03"
      aria-controls="navbarTogglerDemo03" aria-expanded="false" aria-label="Toggle navigation">
      <span class="navbar-toggler-icon"></span>
    </button>
    <a class="navbar-brand" href="/">
      <div class="d-flex align-items-center">
        
        <div class="container">
          <div class="row"><span class="h4" style="color:#10467a">&nbsp;&nbsp;&nbsp;SKKERepositry</span></div>
          <div class="row"><span class="h6" style="color:#10467a">&nbsp;&nbsp;&nbsp;Sungkyunkwan Economics Repository</span></div>
        </div>
      </div>
    </a>

    <div class="collapse navbar-collapse" id="navbarTogglerDemo03">
      <ul class="navbar-nav me-auto mb-2 mb-lg-0">
        <li class="nav-item">
          <a class="nav-link active" aria-current="page" href="https://dcollection.skku.edu/" style="color:#8DC644">
            SKKU dCOLLECTION</a>
          </li>
        <li class="nav-item">
          <a class="nav-link" aria-current="page" href="https://skku.libguides.com/dataresources/en" style="color:#8DC644">
            DATA RESOURCE GUIDES</a>
          </li>
        </ul>
      </div>
    </div>
  </nav>
```


Description for Homepage : Navbar


- templates/base.html

...

```
<li class="nav-item">
  <a class="nav-link active" aria-current="page" href="/article/subject" style="color:#FF6C0F"
    >ADVANCED BROWSING</a>
</li>
</ul>

<ul class="navbar-nav my-2">
  <li class="nav-item dropdown">
    <a class="nav-link dropdown-toggle" href="#" role="button" data-bs-toggle="dropdown" aria-expanded="false">
      {% if user_id %} {{user_id}} {% else %} Account {%endif%}
    </a>
    <ul class="dropdown-menu">
      {% if not user_id %}
      <li><a class="dropdown-item" href="/login">Log in</a></li>
      <li><a class="dropdown-item" href="/register">Sign up</a></li>
      {% else %}
      <li><a class="dropdown-item">My Info</a></li>
      <li><a class="dropdown-item" href="/logout">Log out</a></li>
      {% endif %}
    </ul>
  </li>
</ul>
```

Description for Homepage : Card



Econometrics


[i-kā-nā-me-triks]

The use of statistical methods to develop theories or test existing hypotheses in economics or finance.

Econometrics

Econometrics is the application of statistical methods to economic data in order to give empirical content to economic relationships.

[Read more...](#)



Economics


[e-ka-nā-miks]

A social science concerned chiefly with description and analysis of the production, distribution, and consumption of goods and services.

General Economics

Economics is the social science that studies the production, distribution, and consumption of goods and services.

[Read more...](#)



Law of Demand

[lō av di-mānd]

A fundamental principle of economics that states that at a higher price consumers will demand a lower quantity of a good.

Theoretical Economics

Theoretical economics presents the behavioral aspects of social entities. It expresses and studies the relationship between different economic variables.

[Read more...](#)

- 해당 사이트에서 제공하는 대주제 Econometrics, General Economics, Thoretical Economics 이 3가지 topic에 대한 정보를 3개의 card container를 이용하여 제시하였다. “Read more...” 탭을 통해 주제 관련 wikipedia 및 홈페이지로 링크 연결 가능하다.

Description for Homepage : Card

- templates/home/index.html

```
<div class="container mt-4">
  <div class="row">
    <div class="col-sm-4 py-3 py-sm-0">
      <div class="card box-shadow">
        
        <div class="card-body">
          <h5 class="card-title">Econometrics</h5>
          <p class="card-text">Econometrics is the application of statistical methods to economic data in order to give empirical content to
          <a href="https://en.wikipedia.org/wiki/Econometrics" class="btn btn-primary" style="color:#ffffff">Read more...</a>
        </div>
      </div>
    </div>
    <div class="col-sm-4 py-3 py-sm-0">
      <div class="card box-shadow">
        
        <div class="card-body">
          <h5 class="card-title">General Economics</h5>
          <p class="card-text">Economics is the social science that studies the production, distribution, and consumption of goods and services
          <a href="https://en.wikipedia.org/wiki/Economics" class="btn btn-primary" style="color:#ffffff">Read more...</a>
        </div>
      </div>
    </div>
  </div>
</div>
```

