

Gemini Chat

could you please convert

✦ I can't automatically convert this project, as **React and Django are not interchangeable**. They serve two different, but complementary, parts of a web application.

- **React** (which your `src/` folder contains) is a **frontend** library for building user interfaces. It runs in the user's web browser.
- **Django** is a **backend** framework for building the server-side logic of an application. It runs on your server.

You don't "convert" React to Django. You build a Django backend and have your React frontend *communicate* with it.

What Your Project Is

Based on the files you've provided, you already have a complete application with two distinct parts:

1. **A React Frontend:** All the files in your `src/` directory (`App.js` , `subject.js` , `ClientRequirementCheck.js` , etc.) represent the user sees and interacts with.
2. **A FastAPI Backend:** The files `server.py` and `pdf_extractor.py` make up a Python backend. This backend uses the FastAPI framework, to handle requests.

Your React frontend is already set up to make API calls (like `/extract` or `/compare-pdfs`) to your FastAPI backend, which is implemented in `pdf_extractor.py` .

What "Converting" to Django Involves

What you are asking for is to **replace your FastAPI backend with a Django backend**. This is a manual migration, as it involves rewriting server-side logic.

I can provide a high-level guide on how you would migrate your *existing* Python backend code from FastAPI to Django. The code in `pdf_extractor.py` is almost entirely pure Python and can be reused directly.

High-Level Guide to Migrate Your Backend to Django

Here are the steps to replace your `server.py` (FastAPI) with a Django project.

1. Set Up Your Django Project

First, you'll need to install Django and create a new project and app structure.

Bash

```
# Install Django
pip install django

# Create a new project (e.g., "myproject")
django-admin startproject myproject

# Navigate into the project and create an app (e.g., "api")
cd myproject
python manage.py startapp api
```

2. Move Your Core Logic

Move your `pdf_extractor.py` file into your new `api` app (e.g., `myproject/api/pdf_extractor.py`). This file contains code that can be imported and used by Django.

3. Rewrite Your Endpoints (Views)

You need to translate your FastAPI endpoints from `server.py` into Django "views" in `myproject/api/views.py`.

Example: Migrating the `/extract` Endpoint

This is your **FastAPI** code in `server.py`:

Python

```
# server.py (FastAPI)
@app.post("/extract")
async def extract(file: UploadFile = File(...), form_type: str = Form(...), category: str = Form(None), comment: str = Form(None)):
    # ... logic to save file ...
    try:
        if comment:
            data = await extract_fields_from_pdf(tmp_path, form_type=form_type, custom_prompt=comment)
        else:
            data = await extract_fields_from_pdf(tmp_path, form_type=form_type, category=category)

        if data.get('error'):
            raise HTTPException(status_code=500, detail=data['message'])
        return data
    # ... error handling ...
```

Here is the **Django** equivalent you would write in `myproject/api/views.py`:

Python

```
# myproject/api/views.py (Django)
from django.http import JsonResponse, HttpRequest
from django.views.decorators.csrf import csrf_exempt
from django.core.files.storage import default_storage
import os
import tempfile
from .pdf_extractor import extract_fields_from_pdf # Import your logic

@csrf_exempt # Disable CSRF for this API endpoint for simplicity
async def extract_view(request: HttpRequest):
    if request.method != 'POST':
        return JsonResponse({'error': 'Invalid request method'}, status=405)

    try:
        file = request.FILES.get('file')
        form_type = request.POST.get('form_type')
        category = request.POST.get('category')
        comment = request.POST.get('comment')

        if not file:
            return JsonResponse({'detail': 'No file uploaded'}, status=400)

        # Save the uploaded file to a temporary path
        with tempfile.NamedTemporaryFile(delete=False, suffix='.pdf') as tmp:
            for chunk in file.chunks():
                tmp.write(chunk)
            tmp_path = tmp.name

        # Call your existing logic (now made async)
        if comment:
            data = await extract_fields_from_pdf(tmp_path, form_type=form_type, custom_prompt=comment)
        else:
```

```

        data = await extract_fields_from_pdf(tmp_path, form_type=form_type, category=category)

        os.remove(tmp_path) # Clean up the temp file

        if data.get('error'):
            return JsonResponse({'detail': data['message']}, status=500)

        return JsonResponse(data)

    except Exception as exc:
        return JsonResponse({'detail': str(exc)}, status=500)

```

You would repeat this process for your other endpoints: `/compare`, `/compare-pdfs`, `/verify-revision`, etc.

4. Create Django URLs

Next, you need to "wire up" your new views. Create a `myproject/api/urls.py` file:

Python

```

# myproject/api/urls.py
from django.urls import path
from . import views

urlpatterns = [
    path('extract', views.extract_view, name='extract'),
    # path('compare-pdfs', views.compare_pdfs_view, name='compare-pdfs'),
    # ... add other paths here ...
]

```

Then, include this file in your main `myproject/myproject/urls.py`:

Python

```

# myproject/myproject/urls.py
from django.contrib import admin
from django.urls import path, include

urlpatterns = [
    path('admin/', admin.site.urls),
    path('', include('api.urls')), # Include your app's URLs
]

```

5. Connect React to Django

Finally, you have two options for serving your React app:

Option 1 (Recommended for Development): Keep your React app and Django backend separate, just as you have them now.

1. Run your React app: `npm start` (on `http://localhost:3000`)
2. Run your new Django server: `python manage.py runserver` (on `http://localhost:8000`)
3. Install and configure `django-cors-headers` in your Django `settings.py` to allow requests from `http://localhost:`

Option 2 (For Production): Have Django serve your *built* React application.

1. Run `npm run build` in your React project directory.
2. In your Django `settings.py`, configure `STATICFILES_DIRS` to point to the `build/static` directory from your React
3. Create a "catch-all" view in Django to serve the `build/index.html` file for any request that isn't for your API.

This is a significant migration, but it's very feasible since your core logic in `pdf_extractor.py` is already in Python. The main challenge is migrating the server "endpoints" from FastAPI syntax to Django syntax.

