









# PERN Stack E-Commerce Tutorial

---

 Demo App

Highlights:

-  Tech stack: PERN + TailwindCSS + DaisyUI
-  Rate Limiting & Bot Detection
-  Global state management with Zustand
-  AI Customer Support Chatbot using Groq LLM
-  Error handling on both server and client
-  Deployment for FREE!
-  And much more!

---

## Getting Started

Setup **.env** file

Create a **.env** file in the **/backend** folder:

```
# Server
PORT=3000

# PostgreSQL
PGUSER=your_pg_user
PGPASSWORD=your_pg_password
PGHOST=localhost
PGDATABASE=your_database_name
PGPORT=5432

# Arcjet (optional)
ARCJET_KEY=your_arcjet_key
ARCJET_ENV=development

# Groq AI LLM API for chatbot
GROQ_API_KEY=your_groq_api_key
```

---

## Installation & Running

Run the Backend API

```
cd backend
npm install
npm run dev
```

Server will run at: <http://localhost:3000>

---





## Run the Frontend

```
cd frontend
npm install
npm run dev
```

Frontend will run at: <http://localhost:5173>

---

## Notes

-  Ensure **PostgreSQL** is running locally or use a remote DB URL.
  -  The **Groq API key** is required for the AI chatbot. Without it, the chatbot will fallback to a default error message.
  -  Use **npm run seed** (if implemented) to populate initial product data.
  -  For **production deployment**, update **.env** with your production DB and API keys.
- 

## Tech Stack

Technology	Purpose
<b>PostgreSQL</b>	Database
<b>Express.js</b>	Backend Framework
<b>React</b>	Frontend Framework
<b>Node.js</b>	Runtime Environment
<b>TailwindCSS</b>	Styling
<b>DaisyUI</b>	UI Components
<b>Zustand</b>	State Management
<b>Groq LLM</b>	AI Chatbot
<b>Arcjet</b>	Rate Limiting & Bot Detection

---

## License

This project is open source and available under the [MIT License](#).

---

## Contributing

Contributions, issues, and feature requests are welcome!

---

Made with  by RishabhMittal

#  Peer n C a r e t - E c o m m e r c e   