Technical Report: Rental E-Commerce Website

Steps and Challenges

This document summarizes the steps taken to build the rental e-commerce website and challenges faced during development.

Steps Taken

- Setup: Initialized Next.js and start integrating sanity cms as backend for backend.
- Backend: Developed APIs for car booking, and payments.
- Integration: Connected frontend with backend APIs and enabled dynamic routing

Challenges and Solutions

- . Fetching Data:
 - Problem: Inconsistent API responses.
 - Solution: Standardized API response handling and managed state using React hooks.

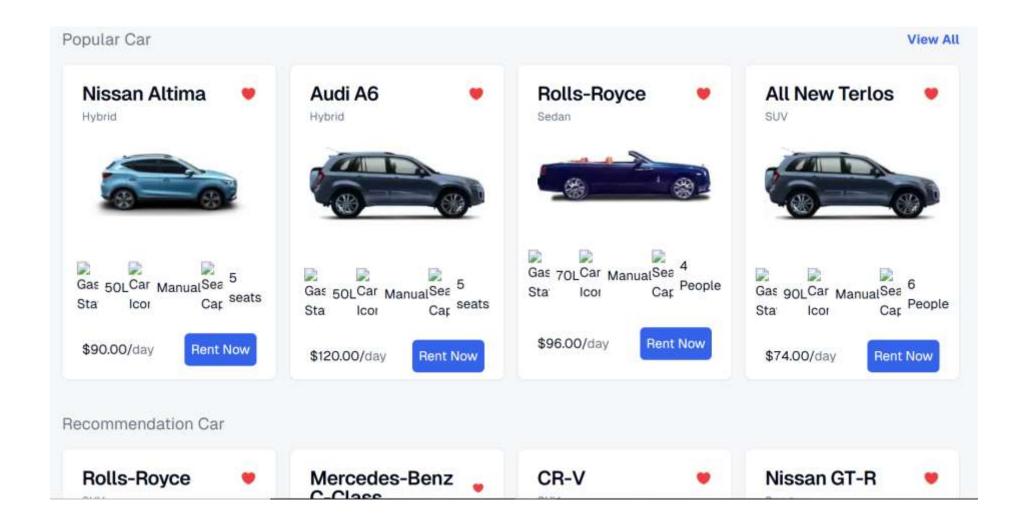
Best Practices

- Code quality with reviews and refactoring.
- Version control with Git.
- control on and grip on apis.

Conclusion

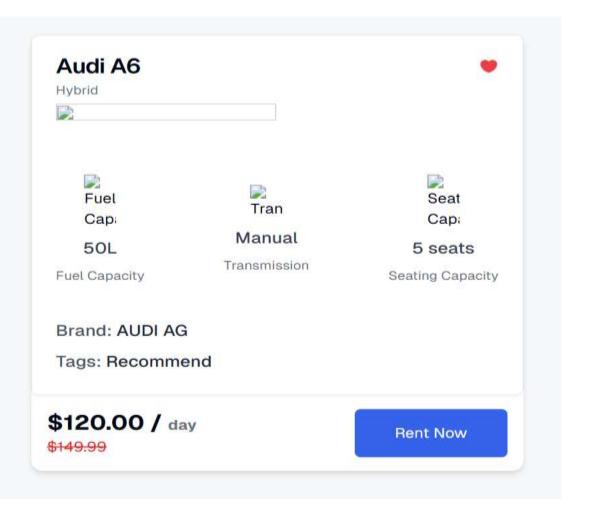
This project showcased practices for tackling challenges and delivering a scalable rental e-commerce platform

The product listing page with dynamic data

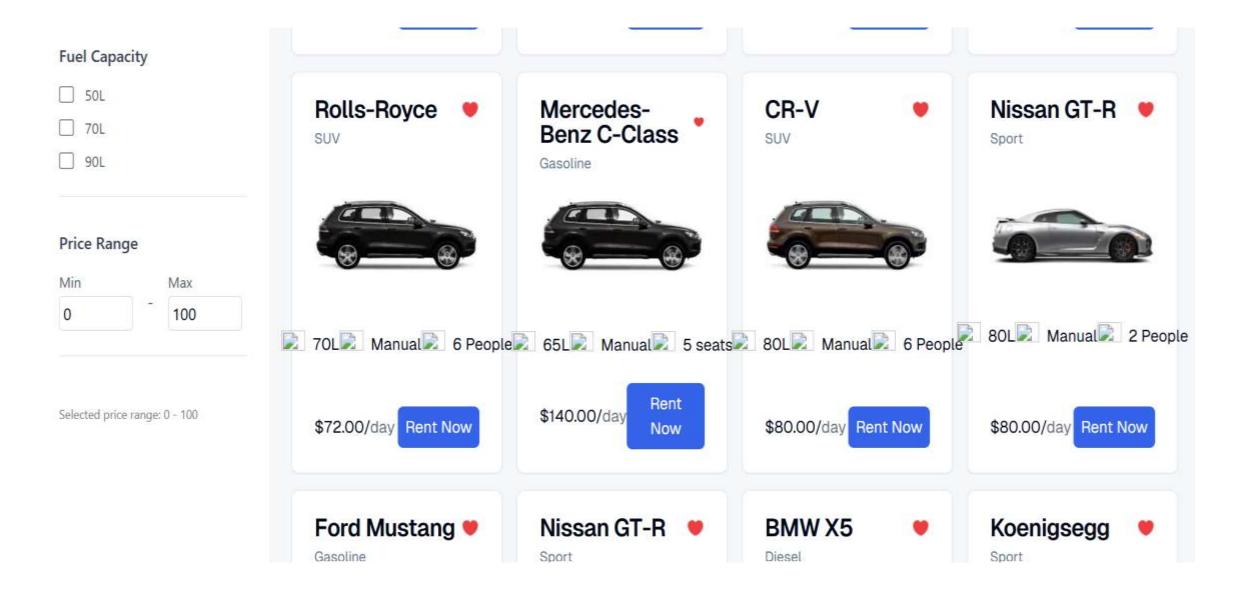


Individual product detail pages with accurate routing and data rendering.

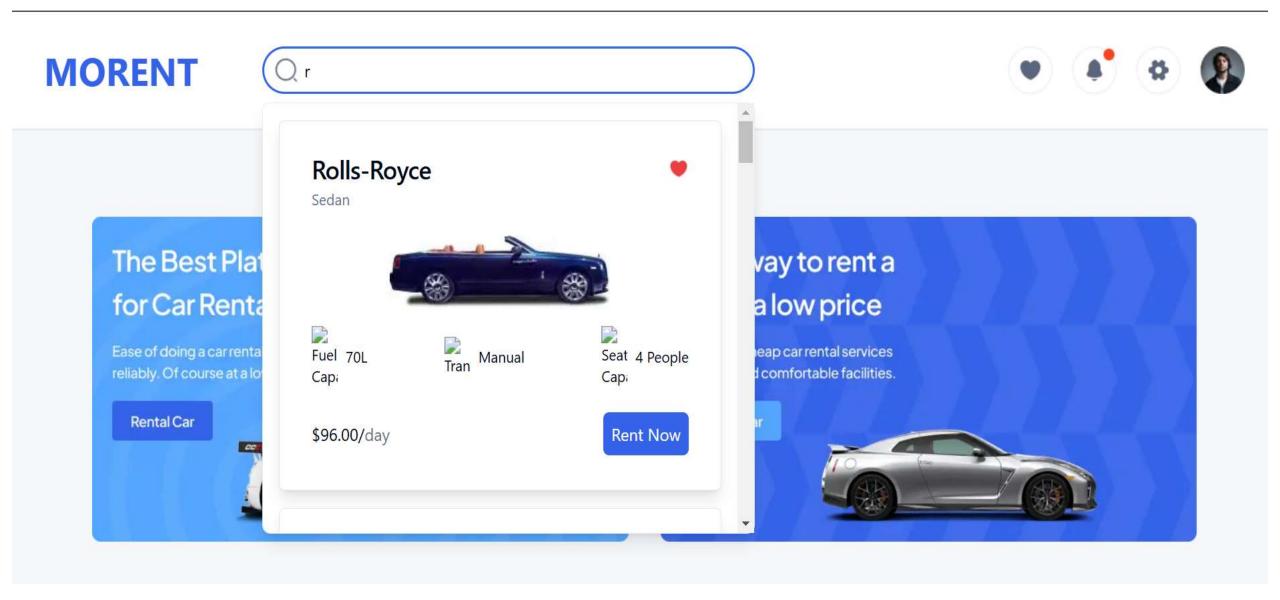




Working category filters



search bar



Code of snippet ProductCard

```
III ....
                                          🏶 page.tsx M 🗙
       EXPLORER
                                          src > app > ⇔ page.tsx > ♦ FirstPage > ♦ map() callback

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                                                 export default async function FirstPage() {
                                                                                                                                                                   > public
                                           TOD
       scripts
                                                        {/* Recommendation Section */}
                                                        <section className="popular w-full flex flex-col gap-4">
                                           167
        JS importTemplate7Data.mjs
                                                          <h1 className="  text-gray-500 text-lg sm:text-xl">Recommendation Car</h1>
       ∨ src
                                                          <div className="sec grid grid-cols-1 sm:grid-cols-2 xl:grid-cols-4 gap-4">
                                           169

∨ app

                                                            {data.slice(4, 12).map((product) => (
                                           170
         > admin
                                                              <div key={product.id}>
                                           171
         categories
H-
                                           172
                                                                <Card className="w-full max-w-[304px] mx-auto h-[388px] flex flex-col justify-between">
          > [sluq]
                                           173
                                                                  (CardHeader)
                                                                    <CardTitle className="w-full flex items-center justify-between">
          page.tsx
                                           174
                                                                      {product.name}{" "}
                                           175

∨ components

                                                                       <Image src={"/heart.png"} alt="Heart Icon" width={20} height={20} />
                                           176

➡ FilterComponent.tsx

                                           177
                                                                    </CardTitle>
          Findcar.tsx
                                                                    <CardDescription>{product.type}</CardDescription>
                                           178
          Footer.tsx
                                           179
                                                                  </CardHeader>
          Navbar.tsx
                                    M
                                                                  <CardContent className="w-full flex flex-col items-center justify-center gap-4">
          > details
                                           181
                                                                     <Image
                                                                       src={urlFor(product.image).url()}
                                           182
          > fonts
                                           183
                                                                      alt={product.name}
         > lib
                                           184
                                                                      width={220}
          > payment
                                                                      height={68}
                                           185
          > studio
                                           186
         favicon.ico
                                                                    <div className=" flex items-center justify-between mt-10">
                                           187
         # globals.css
                                                                       <div className=" flex items-center gap-2">
                                           188
         layout.tsx
                                                                         <Image</pre>
                                                                           src={"/gas-station.png"}
                                           190
         page.tsx
                                                                           alt="Gas Station"
                                           191
                                           192
                                                                           width={26}
       OUTLINE
```

code snippet of search

```
83 ~
File Edit Selection View Go Run ...
                                                                              O rent-acar-web
                                                                                                                                                                 ლ Ш ...
   EXPLORER
                                      FilterComponent.tsx U
                                                                page.tsx M
                                                                                  Findcar.tsx U X
                       C C C
                                      src > app > components > 👺 Findcar.tsx > 🕶 simplifiedCar > 🔑 name

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                                              Codeium: Refactor | Explain | Generate JSDoc | X
                                             export default function Search({ data }: SearchProps) {
   > vscode
                                                const [searchQuery, setSearchQuery] = useState('');
   > node modules
                                                const [filteredCars, setFilteredCars] = useState<simplifiedCar[]>([]);
   > public
   > scripts
                                                Codeium: Refactor | Explain | Generate JSDoc | X
                                                const handleSearch = (e: React.ChangeEvent<HTMLInputElement>) => {
   v src
    v app
                                                  const query = e.target.value;
                                                  setSearchQuery(query);
     > admin
     > categories
                                                  if (query.trim()) {
                                                    const filtered = data.filter((car) => {
     > details
                                                      console.log(car.name.toLowerCase());
     > fonts
                                                      return car.name.toLowerCase().includes(query.toLowerCase());
                                                    D:
     > lib
                                                    setFilteredCars(filtered);
     > payment
                                                  else (
     > studio
                                                    setFilteredCars([]);
     favicon.ico
                                                    setSearchQuery('');
     # globals.css
    layout.tsx
                                               1;
     page.tsx
                                м
                                                return (
    TS schema.ts
                                                  <div className="relative w-full md:w-[492px]">
    > components
                                                    <Image</p>
    > lib
                                                      src="/search-normal.png"
    > sanity
                                                      alt="Search"
   types
                                                      width={24}
   OUTLINE
                                                      height={24}
  > TIMELINE
                                                      className="absolute top-1/2 left-3 transform -translate-y-1/2"
P main* → ⊗ 0 △ 0 ₩ 0
                                                                                          Ln 11, Col 16 Spaces: 2 UTF-8 LF () TypeScript JSX @ Go Live Codeium: (...) ✓ Prettier
```

Code snippet of category

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83 ~
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                EXPLORER
                                                                                     FilterComponent.tsx U
                                                                                                                                          page.tsx M X
                                                                                                                                                                           🐯 Findcar.tsx U 💩

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                                                                                      src > app > categories > 😩 page.tsx > ...
                                                                                                        export default function Page() {
               > .vscode
                > node modules
                                                                                                             {/* Banner Section */}
                > public
                                                                                                             <section className="w-full flex flex-col sm:flex-row items-center justify-center sm:justify-between mb</pre>
                > scripts
                                                                                         96
                                                                                                                 <Image src="/Pick - Up.png" alt="" width={582} height={132} className="w-[200px] md:w-[270px] lg:w-[</pre>
               V SIC
                                                                                                                 <Image src="/Switch.png" alt="" width={60} height={60} className="w-[80px]" />

✓ app
H
                                                                                                                 <Image src="/Drop - Off.png" alt="" width={582} height={132} className="w-[200px] md:w-[270px] lg:w-</pre>
                    > admin
                                                                                                             </section>
                                                                                       100
                   categories
                     > [slug]
                                                                                                             {/* Main Section */}
                     page.tsx
                                                                          M
                                                                                                             <div className="w-full flex">
                                                                                                                 <div className="first hidden sm:flex w-[20%]">
                    > components
                                                                                      104
                                                                                                                     <FilterComponent onFilterChange={handleFilterChange} />
                    > details
                                                                                      106
                    > fonts
                                                                                      107
                                                                                                                 <div className="sec w-full sm:w-[80%] ■ bg-[#f6f7f9] p-4 sm:p-6 flex flex-col gap-10 font-[family-name="sec w-full sm:w-[80%] ■ bg-[#f6f7f9] p-4 sm:p-6 flex flex-col gap-10 font-[family-name="sec w-full sm:w-[80%] ■ bg-[#f6f7f9] p-4 sm:p-6 flex flex-col gap-10 font-[family-name="sec w-full sm:w-[80%] ■ bg-[#f6f7f9] p-4 sm:p-6 flex flex-col gap-10 font-[family-name="sec w-full sm:w-[80%] ■ bg-[#f6f7f9] p-4 sm:p-6 flex flex-col gap-10 font-[family-name="sec w-full sm:w-[80%] ■ bg-[#f6f7f9] p-4 sm:p-6 flex flex-col gap-10 font-[family-name="sec w-full sm:w-[80%] ■ bg-[#f6f7f9] p-4 sm:p-6 flex flex-col gap-10 font-[family-name="sec w-full sm:w-[80%] ■ bg-[#f6f7f9] p-4 sm:p-6 flex flex-col gap-10 font-[family-name="sec w-full sm:w-[80%] ■ bg-[#f6f7f9] p-4 sm:p-6 flex flex-col gap-10 font-[family-name="sec w-full sm:w-[80%] ■ bg-[#f6f7f9] p-4 sm:p-6 flex flex-col gap-10 font-[family-name="sec w-full sm:w-[80%] ■ bg-[#f6f7f9] p-4 sm:p-6 flex flex-col gap-10 flex-
                    > lib
                                                                                                                     <section className="popular w-full flex flex-col gap-4">
                    > payment
                                                                                      109
                                                                                                                          <div className="sec grid grid-cols-1 sm:grid-cols-2 md:grid-cols-3 xl:grid-cols-4 gap-4">
                    > studio
                                                                                      110
                                                                                                                              {filteredData.map((product) => (
                   * favicon.ico
                                                                                      111
                                                                                                                                  <div key={product._id}>
                                                                                                                                      <Card className="w-full max-w-[304px] mx-auto h-[388px] flex flex-col justify-between">
                   # globals.css
                                                                                      113
                                                                                                                                          <CardHeader>
                   layout.tsx
                                                                                                                                               <CardTitle className="w-full flex items-center justify-between">
                                                                                      114
                   page.tsx
                                                                                      115
                                                                                                                                                   {product.name}{" "]
                  TS schema.ts
                                                                                                                                                   <Image src={"/heart.png"} alt="" width={20} height={20} />
                                                                                      116
                  > components
                                                                                      117
                                                                                                                                                </CardTitle>
                  > lib
                                                                                      118
                                                                                                                                                <CardDescription>{product.type}</CardDescription>
            > OUTLINE
                                                                                      119
                                                                                                                                           </CardHeader>
               TIMELINE
                                                                                       120
                                                                                                                                           <CardContent className="w-full flex flex-col items-center justify-center gap-4 text-nowr</p>
```

Script logic for API integration and dynamic routing

```
83 ~
   Edit Selection View Go Run
                                                                                                                                                           ເນີ Ⅲ ···
                                    JS importTemplate7Data.mjs M X
  EXPLORER

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                                    scripts > JS importTemplate7Data.mjs > ...
                                           Codeium: Refactor | Explain | Generate JSDoc | X
                                           async function importData() {
  > .vscode
                                             try (
  > node modules
                                               console.log('Fetching car data from API...');
  > public
  scripts
                                               // API endpoint containing car data
  JS importTemplate7Data.mjs
                                               const response = await axios.get('https://sanity-nextjs-application.vercel.app/api/hackathon/template7
  ∨ src
                                               const cars = response.data;
                                     44
  ~ app
                                               console.log(`Fetched ${cars.length} cars`);
    > admin
    categories
                                               for (const car of cars) {
     > [slug]
                                                 console.log(`Processing car: ${car.name}`);
                              M
    page.tsx
    components
                                                 let imageRef = null;
                                                 if (car.image_url) {

➡ FilterComponent.tsx

                                                   imageRef = await uploadImageToSanity(car.image_url);
    Findcar.tsx
    Footer.tsx
    Navbar.tsx
                              M
                                                 const sanityCar = {
    > details
                                                   type: 'car',
    > fonts
                                                   name: car.name,
    > lib
                                                   brand: car.brand | null,
                                                   type: car.type,
    > payment
                                                   fuelCapacity: car.fuel_capacity,
    > studio
                                                   transmission: car transmission,
   * favicon.ico
                                                   seatingCapacity: car seating capacity,
    # alobals.css
                                                   pricePerDay: car price per day,
                                                   originalPrice: car original price | null,
```