**Galactic Getaways**

<https://galactic-getaways.vercel.app/>

[https://galactic-getaways.app/video](https://galactic-getaways.app/video%0c)

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**Project Specification**

The Galactic Getaways PWA project was built with the aim not only to build a cutting-edge web app but to gain insights into the world of programming and the business of developing digital solutions.

The decision to build this project was driven by a combination of factors, including the growing interest in space exploration, the untapped potential of space tourism, and the desire expand our own skills in Web Development.

**Problem Statement**

The space tourism industry has traditionally been exclusive, limited to a privileged few with access to astronomical budgets. Galactic Getaways seeks to address this issue by democratizing space travel and making it accessible to a broader audience. This project aims to break down barriers and offer an inclusive platform where enthusiasts and adventurers from all walks of life can embark on thrilling space journeys.

Luke O’Hanlon

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**Market Size and Opportunity**

The market for space tourism holds immense potential, with a growing number of individuals expressing interest in exploring outer space. As technological advancements make space travel more feasible, the demand for such experiences is expected to surge in the coming years. While the space tourism industry is still in its early stages, it is projected to expand rapidly, presenting a significant business opportunity.

**Target Audience**

* Space Enthusiasts: Individuals with a passion for astronomy and space exploration seeking an immersive experience of celestial wonders.
* Adventurers: Those eager to venture beyond Earth's atmosphere, embracing the excitement and challenges of space travel.
* Science and Technology Enthusiasts: Individuals intrigued by the scientific and technological aspects of space missions.

**Key Features and Functionality**

To cater to the needs and expectations of its target audience, the Galactic Getaways web app will include the following essential features:

* User Registration and Authentication: A secure and straightforward registration process to create personalized user profiles.
* Tours Catalogue: A catalogue showcasing a diverse range of space travel packages, accompanied by high quality imagery and information.
* Booking System: An intuitive booking system that enables users to select their preferred space travel packages and make bookings/enquiries.
* User Profile and Booking History: A dedicated user profile section where travellers can manage their bookings and access their travel history.

**Technical Requirements**

The development of the Galactic Getaways web app will be carried out using the following technologies and frameworks:

* Front-end: HTML5, CSS3, JavaScript, React.js for a dynamic and responsive user interface.
* Back-end: Node.js and Google Firebase for server-side development and handling of API requests.
* Database: Firebase NoSql Database to store user profiles, booking information, and space destination data securely.
* Authentication: Integration of a Google authentication system to safeguard user data.
* Hosting: Cloud-based hosting infrastructure to ensure scalability and reliability.

**Conclusion**

Throughout the project, the team embraced Agile methodology, using Google Firebase for media storage, database management, and login authentication. The Agile approach fostered effective collaboration, enabling the team to address challenges promptly and make improvements.

Hosting the app on Vercel ensured seamless performance and scalability.

Market research provided a deeper understanding of the space tourism industry, revealing the potential for innovation and inclusivity. The emphasis on personalization, safety, and community engagement underscored the importance of user-centric design and building trust with the audience.

**Design**

Wireframes

Navbar/Footer

A screenshot of a computer

Description automatically generated

Home

The home page provides the user with a clear understanding as to the purpose of the site.

The welcome message is clearly visible to the user when they first arrive at the site regardless of the device they are using.

A screenshot of a video

Description automatically generated

About

Users can view a page dedicated to the company and its goals, this page includes basic information and photos.

A screenshot of a cross

Description automatically generated

Tours

Users have the ability to view information on available products and Book a tour.

The emphasis of the design is to provide a clear layout that can adapt to any size device.

A white circle with black text

Description automatically generated

Contact

Users can navigate to the contact page and reach out to the company.

A screenshot of a contact form

Description automatically generated

Login

Users can create accounts, sign in and see their saved details.

A screenshot of a login screen

Description automatically generated

**Database Schema**

Several custom models were predicted to be required when building the site. These included a User Account/Profile Model and a Tour bookings Model linked to the user account.

A diagram of a string

Description automatically generated

**Web Marketing**

Marketing Strategy

Our marketing objectives are ambitious yet achievable. Over the next year, we aim to:

* Increase brand awareness and recognition among our target audience by 50%.
* Generate a 30% increase in website traffic through engaging content marketing and social media campaigns.
* Achieve a conversion rate of 20% on space travel package bookings.
* Secure media coverage in leading science and travel publications, reaching a potential audience of 1 million readers.

Exploring the Market Potential

The market for space tourism is rapidly expanding, driven by the increasing interest in space exploration and the allure of experiencing weightlessness and breathtaking views. Our research shows that adventure seekers, science enthusiasts, and affluent individuals are the primary target audience for space travel experiences. With advancements in technology and space infrastructure, the demand for these unparalleled journeys is expected to soar in the coming years.

The global space tourism market is projected to reach $1.7 billion by 2027, growing at a CAGR of 16.6% from 2020 to 2027. The market is expected to be driven by the increasing number of space exploration missions and the growing investments in space tourism.

Competitor Analysis

Redefining Space Tourism, Setting Ourselves Apart

While the space tourism industry is becoming competitive, Galactic Getaways stands out as a pioneer in providing comprehensive and unforgettable space travel adventures. Unlike competitors, our tours offer an extended orbit around the Earth, allowing customers to view iconic landmarks from space. Furthermore, our exclusive partnership with leading space agencies allows for a seamless docking experience with the ISS, making Galactic Getaways the preferred choice for discerning travellers seeking a truly exceptional journey.

Unique Selling Proposition (USP)

Galactic Getaways USP lies in its commitment to delivering unparalleled space adventures that go beyond typical space tourism. With our technologically advanced spacecraft and expertly curated itineraries, customers can immerse themselves in the wonders of space travel like never before. Our focus on safety, sustainability, and educational opportunities distinguishes us as the leading space tourism provider for the next generation of explorers.

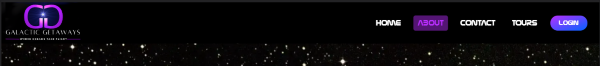
Search Engine Optimization

SEO research is key to driving traffic from a browser-based search i.e. Google to the website. The keyword research has played a crucial role in incorporating words that users typically search for when seeking to purchase art online. To help improve the search engine ranking I ensured the site carries meta tags for a description and keywords which encapsulate the general content and focus of this B2C site.

**Features**

Navigation Bar

The main navigation bar appears at the bottom of the page on Mobile devices and the top of the page (shown below) on Desktop devices, clearly displaying the main navigational links users would require.



Home page

A welcoming homepage was built to clearly convey the site’s purpose. The Nav buttons for the user to go straight to the tours or contact section are located at the bottom of all pages in mobile layout.

A white space shuttle in space

Description automatically generated

About Page

A screenshot of a space program

Description automatically generated

Tours Page

A white space shuttle in space

Description automatically generated

Contact Page

A screenshot of a phone

Description automatically generated

Login Page

A black background with white text and a blue circle

Description automatically generated

**Project Planning**

Project Overview

Galactic Getaways is a fictional space tourism business aiming to provide users with an immersive web application experience that allows them to explore and book space travel packages. The project was carried out by a team of two developers using Agile methodology, with weekly Sunday evening meetings over a span of four weeks.

Week 1: Sprint Planning Meeting

During the first week, we held a sprint planning meeting to establish the project's scope, goals, and define the initial set of features to be implemented. The product backlog was created, consisting of features such as:

* User Registration and Authentication: Allow users to sign up and log in securely to access personalized features.
* Space Destination Catalogue: Display a catalogue of available space destinations with images and detailed descriptions.
* Booking Functionality: Enable users to select and book their preferred space travel packages.
* User Profile and Booking History: Provide users with a profile section to manage bookings and view their travel history.

Progress

During this initial phase, we successfully set up the project's development environment and version control system. Basic user registration and login functionality were implemented, laying the groundwork for future features.

Week 2: Sprint Review and Retrospective

The second week began with a sprint review to evaluate the progress made and discuss any adjustments needed to meet the project's goals. The following features were the focus of this sprint:

* Connecting the API for displaying the globe and pinpointing the ISS.
* Responsive Design: Ensure the web app is responsive and optimized for various devices.

Progress

During this sprint, we successfully got the ISS API connected and started with a basic map as proof of concept. Additionally, we implemented a responsive design, ensuring a seamless user experience across different devices.

Setbacks

We encountered some issues with combining the map with a 3d Globe, which required additional testing and debugging. Despite this challenge, they were able to resolve the issues and proceed with the project.

Week 3: Mid-Point Check-in

The third week involved a mid-sprint check-in to assess the progress and discuss any issues.

Progress

During this phase, we divided up the work to be done on the documentation and made a start on piecing together our report.

Week 4: Final Sprint and Project Conclusion

The final week involved intense focus on completing the remaining features and conducting comprehensive testing for a bug-free experience. The feature targeted for this sprint were:

* Error Handling and Security: Ensure robust error handling and implement security measures to safeguard user data.

Progress

During the last sprint, we addressed security concerns, ensuring data protection throughout the application.

Setbacks

The final week experienced minimal setbacks, primarily involving minor UI glitches and issues related to handling edge cases. These were promptly fixed during thorough testing.

Project Conclusion

Despite facing a few challenges along the way, the team successfully completed the web app for Galactic Getaways within the allocated four-week timeframe. Through Agile methodology, they were able to adapt to changing requirements and prioritize features effectively.

**Testing**

Testing Strategy

We utilized a manual testing strategy for the development of the site.

All pages and functionality were manually tested by multiple users across different devices and browsers.

Lighthouse Testing

Below you can see the results of Googles Lighthouse Testing.

**Validation**

We implemented a "Contact Me" form that enables users to reach out to us for inquiries, feedback, or any other communication. The form aims to capture essential information from the users, such as their First Name, Last Name, Email, Tour Package selection, and Message. Ensuring the accuracy and completeness of this data is crucial for effective communication.

**First Name and Last Name**

Both the First Name and Last Name fields were marked as required, meaning users must input their first and last names before submitting the form. To accomplish this, we utilized the HTML required attribute in the input fields. Additionally, we also employed client-side validation to offer real-time feedback to users, highlighting any missing or incorrectly formatted data.

**Email**

The Email field is another critical aspect of the Contact Me form, as it enables us to respond to users' inquiries. To ensure a valid email address is provided, we implemented both client-side and server-side validation. On the client-side, we employed regular expressions to check the email's format, providing immediate feedback if an invalid email pattern is detected. On the server-side, we further validated the email address to ensure it meets our specific criteria, such as domain whitelisting and checking against existing records to avoid duplicate submissions.

**Tour Package**

The Tour Package selection field is important for understanding users' preferences and allows us to tailor our responses accordingly. While the field itself is a dropdown or a set of radio buttons, we set a default option as "Select Package" and made it a required field. By doing so, users are compelled to choose a specific tour package, reducing the likelihood of incomplete submissions.

**Message**

The Message field provides users with the opportunity to express their inquiries or feedback in detail. We encouraged users to provide their message by making this field required.

**Summary**

In summary, our Contact Me form implements a robust validation strategy for each input field, ensuring that all required information is captured accurately. By utilizing both client-side and server-side validation techniques, we enhance the user experience and maintain data integrity. As a result, we can promptly respond to user inquiries and provide a seamless communication experience for our valued users.

**Technologies**

* JavaScript
* Custom JavaScript was utilized to allow Users to close site messages and increment/decrement cart items.
* React
  + React was used to create the frontend of the site.
* CSS
  + Custom CSS was written for many areas on the site to implement custom styling and escape a bootstrap look and feel to the site.
* HTML
  + HTML was used as the base language for the templates created for the site.

**Packages & Libraries Used**

* VS Code was used to develop the site.
* Git was utilized for version control and transferring files between the code editor and the repository.
* GitHub was utilized for storing the files for this project.
* EmailJs was used to send emails from the contact form.
* Three-globe was used to create the 3D globe on the Tours page.
* Firebase was used to store the data for the site, this included the database, images, user accounts and the tour bookings.
* Vercel was used to deploy the site.

**Deployment**

We used Vercel for deployment as it was a simple and robust solution.

The steps to deploy are:

Install Vercel

* npm install -g vercel

Build the React app

* npm run build

Deploy to Vercel

* vercel

That’s it!

Forking the repository

By forking the GitHub repository, you can make a copy of the original repository to view or change without it effecting the original repository.

This can be done by

* Log into GitHub or create an account.
* Locate the repository at https://github.com/KSheridan86/GalacticGetaways.
* At the top of the repository, on the right side of the page, select "Fork" from the buttons available.
* A copy of the repository should now be created in your own repository.

Create a clone

Creating a clone enables you to make a copy of the repository at that point in time - this lets you run a copy of the project locally:

This can be done by:

* Navigate to https://github.com/KSheridan86/GalacticGetaways.
* click on the arrow on the green code button at the top of the list of files.
* select the clone by https option and copy the URL it provides to the clipboard.
* navigate to your code editor of choice and within the terminal change the directory to the location you want to clone the repository to.
* type 'git clone' and paste the https link you copied from github
* press enter and git will clone the repository to your local machine.

**Credits**

Luke O’Hanlon – 60%

* Routes/Navbar.
* Project layout.
* 3D Globe & map implementation.
* User Authentication.
* Boiler plate terms & conditions.
* Handled generation of pictures & video.
* Newsletter.
* Validation.

Ken Sheridan - 40%

* Managed the backend.
* Hooked up ISS API.
* Worked on styling.
* Report.