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Team Name:

Team members Names	Engineering Specialisation	Graduating year	College Names
Parth Langalia	CSE - Software Engineering	2024	SRMIST
Anunay Singh	CSE - ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING	2024	SRMIST
Joel Sunny	CSE - Software Engineering	2024	SRMIST

Tell us a bit about yourself

	Parth Langalia	Anunay Singh	Joel Sunny
Any projects you've worked on	Yes, API testing through swagger, QR code generation	YES. Test Case Automation using LLM	YES. Violence Detection and crime surveillance
Past Hackathon experiences	Flipkart Grid - software dev track, TechSurf 2023	Flipkart Grid	Flipkart Grid
Accolades or awards that you have received	NIL	NIL	SRM Academic Performance Scholarship (59K Rupees)
Other details (If any)	1 prior internship	2 prior internships and Project expo experince	3 prior internships

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HelmArt - making wearing helmets, an interesting and comfortable experience

Making wearing a helmet interesting for people requires a multi-faceted approach that combines creativity, education, incentives, and engagement. Here's an overview of a solution that can help achieve this goal:

Process Flow:

- Awareness and Engagement: Launch an educational campaign across media channels, focusing on the benefits of helmet-wearing and personalization.

- Customization: Offer users an app or website where they can customize their helmets with unique designs.

- Gamification: Integrate gamification features, such as challenges and rewards, to encourage consistent helmet use.

- AR/VR Experience: Develop an AR/VR app showcasing helmet safety scenarios, providing users with an immersive perspective.

- Community Building: Establish an online community where users can share designs, stories, and tips.

- Influencer Collaboration: Partner with influencers to promote helmet-wearing through creative content.

- Entertainment and Education: Create engaging content that combines safety education with entertainment.

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Entertainment and Education: Create engaging content that combines safety education with entertainment.

Data Analysis: Analyze user data to personalize recommendations and further refine engagement strategies.

Design Details

- Working Principle

At HelmArt, our website seamlessly integrates creativity and safety. Choose from a curated collection of pre-designed helmets or unleash your artistic flair by customizing your own. Our user-friendly interface empowers you to select colors, patterns, and graphics, resulting in a truly unique helmet that matches your personality. But HelmArt isn't just about aesthetics; it's about experience. Dive into a virtual reality journey to feel your helmet before it arrives, ensuring the perfect fit. Stay inspired with our latest helmet fashion trends, keeping you ahead in style. With HelmArt, your headgear isn't just protection – it's a canvas of self-expression.

Design Details

Details with Pictures, Videos of simulations

Design Details

- Simulations/Proto sample

The prototype website link is
https://helmart.my.canva.site/

It is compatible to run on phone,pc and tablets.

Major Risk and Mitigation

RISKS

- Data Security Breaches: Storing customer data and design files puts your website at risk of hacking and data breaches, potentially exposing sensitive information.
- Quality Control: Ensuring consistent quality in personalized designs can be challenging, leading to customer dissatisfaction if the final product doesn't meet expectations
- Intellectual Property Issues: Users might submit copyrighted or trademarked designs, causing legal issues. Striking a balance between user creativity and copyright protection is crucial.
- Technical Glitches: Online platforms can experience downtime, slow loading times, or glitches that disrupt the user experience, leading to frustration and potential loss of sales.
- Privacy Concerns: Customers may be apprehensive about sharing personal information and designs online due to privacy concerns or potential misuse of their data.

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Major Risk and Mitigation

Mitigation

- Robust Cybersecurity: Invest in robust security measures like SSL certificates, regular security audits, and encryption to safeguard customer data from breaches.

- Clear Design Guidelines: Provide clear guidelines for design submissions and communicate potential variations in the final product. Implement a review process to catch discrepancies.

- Copyright Education: Educate users about copyright and trademark regulations, and implement a review process to identify potentially infringing designs before production.

- Reliable Hosting: Choose a reliable hosting service and employ content delivery networks (CDNs) to minimize downtime and ensure a smooth user experience.

- Transparent Privacy Policies: Clearly outline how customer data will be used, stored, and protected in your privacy policy. Obtain explicit consent and allow users to control their data

HelmArt: Customizable Helmets for Safety and Style

Overview
HelmArt is a unique product that has the potential to revolutionize the helmet industry. By allowing users to design their own helmets, we encourage people to wear helmets by giving them a sense of ownership and personalization.
The AR/VR feature allows users to visualize their helmets and estimate head size, making it easier to design the interior of the helmet for personal comfort.
We at HelmArt aim to increase helmet usage and promote safety while providing a unique and personalized experience for users.

Market Analysis
The helmet industry is a growing market. According to a report by Grand View Research, the global helmet market is expected to reach $34.2 billion by 2025, with a compound annual growth rate of 6.1%. With an increasing emphasis on safety in many industries, including cycling, motorcycling, and extreme sports, the demand for high-quality helmets is growing. In addition, our state-of-the-art AR/VR features provide a unique and innovative experience that is likely to appeal to a wide range of users. Overall, the market potential for HelmArt looks promising.

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Product Features :
- Fully customizable helmet designs, allowing users to create unique and personalized helmets using their own creativity.
- AR/VR technology for visualizing helmet designs and estimating head size, ensuring a comfortable and secure fit.
- Emphasis on safety, with high-quality materials and rigorous testing to ensure optimal protection for users.

Revenue Streams :
- Direct sales of customizable helmets through the application, with a markup on production costs.
- In-app purchases of additional helmet design options and features.
- Partnerships with helmet manufacturers for production and distribution of customized helmets.

Conclusion

HelmArt has significant potential in the growing helmet market. The combination of customization, personalization, and safety features makes it a unique and compelling product for consumers. The revenue streams from direct sales, add-ons, and partnerships provide multiple paths to profitability. Overall, the fully customizable helmet application has the potential to be a successful and profitable business venture.

Product Development Timeline:

1. Idea and Conceptualization (1-2 months):

2. Prototype Development (2-3 months):

3. MVP Development (4-6 months):

4. Design and User Experience Refinement (2-3 months):

5. Full Feature Development (6-8 months):

6. AR/VR Integration and Testing (3-4 months):

7. Manufacturing and Supply Chain Setup (4-6 months):

8. Beta Testing and Quality Assurance (2-3 months):

9. Marketing and Pre-launch Activities (3-4 months):

10. Official Launch (1 month):

11. Ongoing Updates and Growth (Ongoing):

Estimated Budget

1. Development Costs:
   - Prototype Development: $20,000 - $30,000
   - MVP Development: $50,000 - $80,000
   - Full Feature Development: $100,000 - $150,000
   - AR/VR Integration and Testing: $40,000 - $60,000
   - Beta Testing and Quality Assurance: $20,000 - $30,000
   - Ongoing Updates and Maintenance (per year): $30,000 - $50,000
2. Design and User Experience:
   - UI/UX Design: $15,000 - $25,000
   - Graphic Design (for custom helmet options, decals, etc.): $10,000 - $15,000
3. Manufacturing and Supply Chain:
   - Establishing Manufacturing Partnerships: $20,000 - $30,000
   - Initial Production Setup and Customization Tools: $30,000 - $50,000
4. Marketing and Launch:
   - Branding and Logo Design: $5,000 - $10,000
   - Marketing Strategy and Content Creation: $20,000 - $30,000
   - Social Media and Influencer Marketing: $15,000 - $25,000
   - PR and Launch Events: $10,000 - $20,000
5. Miscellaneous Expenses:
   - Legal and Intellectual Property Protection: $10,000 - $15,000
   - Software and Development Tools: $5,000 - $10,000
   - Contingency (10-15% of total budget): Variable
6. Ongoing Costs (per year):
   - Server Hosting and Maintenance: $5,000 - $10,000
   - Customer Support: $15,000 - $20,000

Total Estimated Budget Range: **$450,000 - $800,000** (excluding ongoing yearly costs)