EAST WEST UNIVERSITY

Course Title: IT Project Management and Entrepreneurship

Course code: CSE495

Section: 2

Implementation and Deployment Project of Intelligent System for Enhancing Artistic Expression

(Project Charter, Stakeholder analysis, Risk Analysis)

Submitted To:

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Project Charter

Project Name: **Implementation and Deployment Project of Intelligent System for Enhancing Artistic Expression**	
Project Owner: Zarin Tasnim Nuzhat	Decision Making Exec: Israfil Arman
Project Sponsor: Israfil Arman	Project Manager: Md. Habibuzzaman
Customer: Samiu Esika Upoma	Charter Date: 20.12.2023
Expected Start Date: 01.01.2024	Expected Completion Date: 07.11.2024

Project Description:

In this interactive tool, users can draw various objects on a digital canvas, and our intelligent system will classify and measure the accuracy of their drawings.

The process begins with users expressing their creativity by sketching an object of their choice. Once the drawing is complete, our machine learning model steps in to classify and understand the drawn object. This is a challenging task, as drawings come in diverse styles, qualities, and complexities. Our model, trained on a wide range of examples, works to accurately recognize and understand the user's creation.

The next exciting step involves measuring the accuracy of the drawing. Our system evaluates the drawing against a set of criteria, providing users with specific feedback on the accuracy of their depiction. This feedback is not just about pointing out mistakes but aims to be constructive and actionable, guiding users on how to improve their drawing skills.

Project Mission:

The mission of the Implementation and Deployment Project of Intelligent System for Enhancing Artistic Expression is to develop user-friendly software using advanced machine learning (like CNN) and a simple interface to help users improve their drawing skills. By fine-tuning accuracy, we aim to empower users to express themselves creatively, overcoming challenges like fine motor skill development. The project's purpose is to enhance drawing skills through personalized feedback, fostering a positive learning environment. Ultimately, our initiative seeks to positively influence users’ cognitive and emotional development, improving academic performance, and creating opportunities in fields that require precise drawing skills.

Project Objectives:

- Implement a user-friendly app for sketching objects.
- Identify/detect the object drawn.
- Measure the accuracy or correctness of the object drawn.

Project Scope and Schedule:

No.	KEY Activities and Milestones	Predecessor	Prerequisite	Duration of the Activity /Date of the Milestone	Resource Allocation
1	Start	-----			
2	Project Initiation	1	Define project goals and objectives	1 week	1
3	Stakeholder Identification	2	Identify key stakeholders and their roles	1 week	1,2
4	Requirement Gathering	2	Define user requirements and system specifications	2 weeks	1,2
5	System Design and Architecture	3,4	Complete requirement analysis and design system	3 weeks	1,2,6,7,8
6	Machine Learning Model Training	5	Collect and preprocess training data	6 weeks	5,7,8
7	Object Identification	6	Implement object detection algorithms	4 weeks	5
8	Accuracy Measurement Algorithm	6	Develop algorithms to measure drawing accuracy	4 weeks	4
9	User Interface Design	5	Design an intuitive and simple user interface	3 weeks	3
10	App Development	6,7,8,9	Implement user-friendly sketching app	8 weeks	4
11	ML Model Integration	10	Integrate machine learning model into the app	4 weeks	4,5
12	User Testing	11	Gather user feedback and make necessary adjustments	2 weeks	9,10
13	System Integration Testing	11	Ensure all components work together smoothly	3 weeks	9,10
14	Deployment	12,13	Release the app for public use	2 weeks	1,4
15	Monitoring and Maintenance	14		4 weeks	4
16	End	15			

Project Resources and Cost:

COST TYPE	NO	VENDOR / LABOR NAMES	RATE/DAY	RESOURCE UNIT	DURATION	TOTAL AMOUNT
LABOR	1	Project Manager	2500	1	20	50,000
	2	Project Analyst	2000	1	40	80,000
	3	UX/UI Designer	1200	1	20	24,000
	4	Developers	1500	2	120	3,60,000
	5	Machine Learning Expert	1500	1	90	1,35,000
	6	Database Engineer	1500	1	20	30,000
CONSULTANTS	7	Machine Learning Model Consultant	2000	1	10	20,000
	8	Drawing Education Specialist	2000	1	10	20,000
TEST & QC	9	Test Engineer	1500	1	30	45,000
	10	Quality Assurance Expert	1500	1	30	45,000
		TOTAL COSTS				8,09,000

Project Benefits:

- Enhanced Drawing Accuracy
- Cognitive and Artistic
- Development Educational
- Tool Positive Learning
- Environment Efficient
- Resource Utilization
- Adaptable Learning Experience

Project Risks:

- Machine Learning Model Accuracy
- Bias in Machine Learning
- Dataset Collection
- Computational Resource Constraints
- User Engagement
- Privacy Concerns
- Educational Effectiveness

Project Stakeholders:

- End Users (Kids and Children, Parents/Guardians)
- Educational Institutions
- Machine Learning Developers
- User Interface Designers
- Privacy and Legal Experts
- Project Managers
- Project Owner
- Project Sponsor
- Community Representatives
- Environmental Experts
- Educational Researchers

Critical Success Factors (enablers): Accurate Machine Learning Model, Engaging User Interface (UI/UX), Diverse Drawing Dataset, Adequate Computational Resources.

Constraints: Technological, Budget, Limited Computing Resources.

Assumptions: Technological stability, Educational Institution Collaboration.

Other Related Projects/Initiatives:

1. **Quick Draw**: Online drawing game by Google. https://indiaai.gov.in/article/exploring-quick-draw-an-online-game-by-google
2. **Skribbl**: Online multiplayer drawing and guessing game. https://skribbl.io/#:~:text=skribbl.io%20is%20a%20free,be%20crowned%20as%20the%20winner
3. **Drawing Now**: Step by step online learning platform. https://www.drawingnow.com/

Project Owner:	Zarin Tasnim Nuzhat	Project Manager:	Md. Habibuzzaman
	20-12-2023 *Signature & Date*		**20-12-2023** *Signature & Date*

Stakeholder, Risk Analysis and Management

Stakeholders	Influence	Current Support	Calculated Rating	Success Criteria	Action	Engagement Strategy	Lead
End Users (Kids and Children, Parents/Guardians)	5	2	10	Positive feedback from users, visible improvement in drawing skills, increased engagement	Implementing requested features, incorporating user suggestions, conducting user workshops.	Regular surveys, feedback sessions, and gamification elements to make the tool enjoyable	User Experience (UX) team
Educational Institutions	4	3	12	Improved academic performance, positive impact on fine motor skills, integration into the curriculum	Customizing features for educational use, providing training materials, addressing institutional concerns	Collaborative workshops, pilot programs, and showcasing success stories.	Education liaison team
Machine Learning Developers	5	1	5	High model accuracy, adaptability to diverse drawing styles, scalability.	Continuous model refinement, addressing feedback, fostering a culture of innovation.	Regular updates on model performance, collaboration on model improvements, and recognition of contributions.	Machine learning research and development team
User Interface Designers	5	1	5	Positive feedback on the interface, intuitive user experience	Iterative design updates based on user feedback, ensuring accessibility standards.	User testing sessions, design workshops, and acknowledgment of design excellence	UI/UX design team
Privacy and Legal Experts	4	2	8	Compliance with data protection laws, user trust in data security.	Periodic privacy audits, legal compliance checks, and quick response to legal inquiries.	Regular updates on privacy measures, transparency in data handling, and addressing privacy concerns.	Legal and privacy compliance team
Project Managers	5	1	5	Timely project delivery, adherence to budget, and	Risk assessment and management,	Regular project updates, transparent communication,	Project management team,

				successful feature implementation.	efficient project coordination, and proactive issue resolution.	and addressing concerns promptly.	communication specialists.
Community Representatives	4	2	8	Positive community impact, active engagement.	Incorporating community suggestions, involving representatives in decision-making processes.	Community outreach programs, forums for open dialogue, and addressing community concerns.	Community engagement specialists
Environmental Experts	4	2	8	Sustainable software development practices, minimized environmental impact.	Conducting environmental impact assessments, implementing eco-friendly practices	Regular updates on eco-friendly features, collaboration on green initiatives.	Environmental impact assessment team
Educational Researchers	4	3	12	Positive findings in research on the tool's impact on learning and cognitive development.	Providing necessary research materials, participating in research conferences, and facilitating data access.	Collaborative research projects, sharing data for analysis, and acknowledging research contributions.	Research collaboration team
Project Owner	5	1	5	Successful project delivery, meeting objectives within budget and timeline.	Providing necessary resources and support, resolving high-level issues, and ensuring alignment with organizational goals	Regular project updates, transparent communication, and showcasing project milestones.	Project Owner, Project Managers
Project Sponsor	5	1	5	Positive impact on the organization's goals, successful deployment, and recognition for supporting innovative projects	Providing financial and strategic support, addressing high-level organizational concerns, and advocating for the project at higher levels.	Regular project briefings, demonstrating project value, and maintaining a strong partnership.	Project Sponsor, Project Owner

Current Support
1= Active supporter
2= Moderately positive
3=Neutral
4= Moderately negative
5=Negative

Power/Influence
1= No power
2= Some influence over project outcomes
3= Moderate Influence
4=Major influence on project
5= Maximum influence

Stakeholder Rating	Thresholds
Major (must take action)	13-25
Minor (should take action)	6-12
Insignificant(observe)	1-5

Risk Event Description And Impact	***Probability H/M/L***	***Severity H/M/L***	***Mitigation Strategy***	***Who/When***
1. Machine Learning Model Accuracy: The machine learning model may not accurately identify and classify drawings, leading to inaccurate feedback for users	H	H	Implement regular model updates based on user feedback, conduct extensive testing on diverse drawing styles during the development phase	Machine Learning Developers, Continuous throughout the project
2. Bias in Machine Learning: The machine learning model may exhibit bias, resulting in unfair or inaccurate evaluations, potentially affecting user experience negatively	M	H	Implement fairness-aware machine learning techniques, conduct bias audits during model development, and ensure diverse and representative training datasets	Machine Learning Developers, Continuous throughout the project.
3. Dataset Collection: Inadequate or biased training data may lead to a model that doesn't generalize well to diverse user drawings	M	H	Use a diverse dataset representing various drawing styles, continuously update and expand the dataset based on user interactions, and conduct regular data quality assessments	Machine Learning Developers, Continuous throughout the project
4. Computational Resource Constraints: Insufficient computational resources may lead to delays in model training, deployment, or response times, impacting user experience	M	M	Optimize code and algorithms for efficiency, consider cloud-based solutions for scalability, and monitor resource usage during peak times.	DevOps and Infrastructure Team, Continuous throughout the project.
5. User Engagement: Users may not find the tool engaging, leading to low adoption rates and limited impact on drawing skill improvement	M	H	Conduct user feedback surveys, implement gamification elements, and regularly update the tool with new features to maintain user interest	User Experience (UX) Team, Continuous throughout the project.
6. Privacy Concerns: Users may have concerns about the privacy of their drawings and data, potentially leading to a loss of trust	M	H	Clearly communicate the data usage policy, implement robust data encryption, and regularly update users on privacy measures	Privacy and Legal Experts, Continuous throughout the project

7. Educational Effectiveness: The tool may not effectively contribute to improving users' drawing skills or cognitive development as intended	M	H	Collaborate with educational experts, conduct regular assessments on the tool's educational impact, and update features based on educational feedback	Education Liaison Team, Continuous throughout the project