BITI 3533 ARTIFICIAL INTELLIGENCE PROJECT MANAGEMENT

PROFESSOR TS. DR. GOH OH SING

PROJECT FRAMEWORK

PROJECT TITLE: BANK LOAN APPROVAL PREDICTION SYSTEM

GROUP MEMBERS:

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Based on the lecture slides and related information given in ulearn, discuss the Project Management Framework as shown in Figure 1 when relate to Artificial Intelligence Project Management and the chosen title as in step no 2.

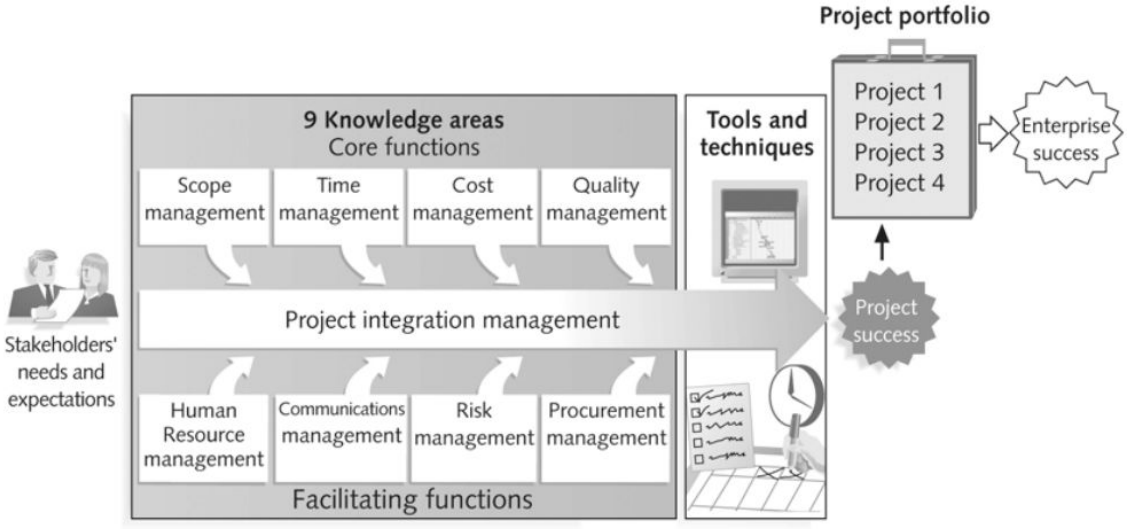


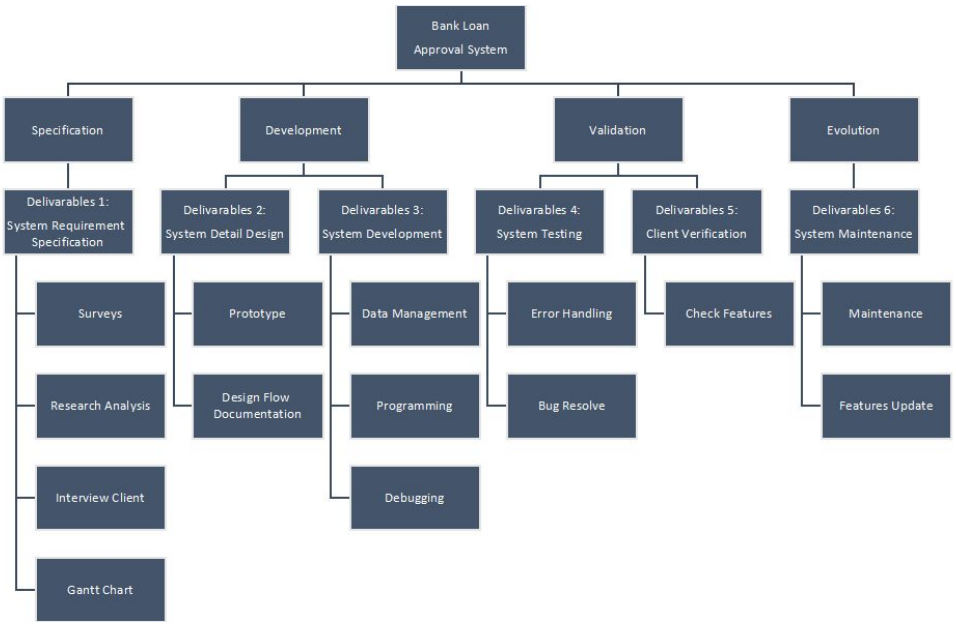
Figure 1 Project Management Framework

STAKEHOLDERS OF THE PROJECT AND THEIR EXPECTATIONS

Stakeholders	**Expectations**
1. Customer: Local Banks	· Produce an Intelligent System that predict loan approval · Produce an accurate loan predictor so that they don't lose any customers. · The inputs for the system should be personal details like Gender, Marital Status, Education, Income, Credit History and so on.
2. User: Bank Customers	· Easy and simple loan predictor · Highly accurate as they don't want to take any risk on loan matter
3. The project manager: Jeyshalini Tevosha	· Fulfill customer's requirements · Produce a successful AI project · Meet the goal of project · Build a better project team
4. The project team members: Previna Munuganan Shivedhassen Balasingam Vishwareeta Vanoo	· Fulfill Project Manager's requirements · Produce a successful AI project · Fulfill the responsibility of their respective roles

SCOPE MANAGEMENT

Work Breakdown Structure



TIME MANAGEMENT

Phase	Deliverables	Task	Duration (Days)	Dependency	Milestones
Specification	System Requirement Specification	Surveys	3	None	26 October 2020 – 29 October 2020
		Research Analysis	3	Survey	30 October 2020 – 2 November 2020
		Interview Client	4	Research Analysis	3 November 2020 – 6 November 2020
		Gantt Chart	1	None	7 November 2020 - 8 November 2020
Development	System Detail Design	Prototype	6	Gantt Chart	8 November 2020 - 14 November 2020
		Design Flow Documentation	6	Prototype	15 November 2020 - 21 November 2020

	System Development	**Data Management**	**4**	**Design Flow Documentation**	**22 November 2020 - 26 November 2020**
		Programming	**26**	**Interview Client**	**27 November 2020 – 23 December 2020**
		Debugging	**4**	**Programming**	**24 December 2020 - 29 December 2020**
Validation	**System Testing**	**Error Handling**	**2**	**Debugging**	**30 December 2020 - 1 January 2021**
		Bug Resolve	**1**	**Error Handling**	**2 January 2021 - 3 January 2021**
	Client Verification	**Check Features**	**2**	**Bug Resolve**	**4 January 2021 - 6 January 2021**
Evolution	**System Maintenance**	**Maintenance**	**5**	**Data Management**	**7 January 2021 - 11 January 2021**
		Features Update	**6**	**Maintenance**	**12 January 2021 - 18 January 2021**

COST MANAGEMENT

Hardware and Software Costs	· Laptops · Anaconda (Python IDE)	RM 0 (owned) RM 0 (open source)
Travel and Training Costs	· Travel to meeting place · Training	RM 0 (Online due to CoVid-19) RM 0 (self-trained degree students)
Effort Costs	Jeyshalini Tevosha Shivedhassen Balasingam Vishwareeta A/P Vanoo Previna A/P Munuganan	RM 1100 RM 1100 RM 1100 RM 1100
Overheads	· Electricity · Wi-Fi connection · Mobile Data	RM 100 (Estimated value) RM 150 (Average amount) RM 10 - RM 30 (Based on ISP)

QUALITY MANAGEMENT

Quality Management is used to efficiently manage the quality throughout the development of the project starting from planning to the software deployment. The primary goal of making a quality management plan is to ensure that the project deliverable are of adequate quality and fit for the software requirements. The quality management components of our Bank Loan Approval Prediction System will be quality assurance, quality control, quality improvements and quality planning.

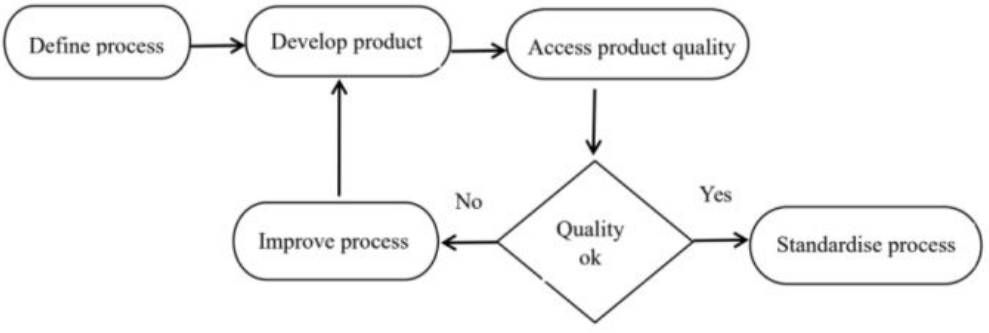
Quality Assurance - ensure the project quality management processes

Quality Control - through the development of quality outputs

Quality Improvements - review points to assess and improve quality where possible

Quality Planning - select applicable procedures and standards on the project and modify if required

PROCESS-BASED QUALITY

It 

is very important to assess the process based quality of the project. The project manager and the team members will be assessing the process based quality throughout the project management.

a) Poor software quality can be harmful to human life and safety. The performance of software products may be influenced by quality problems. Thus, it is important to

check whether a product is safe or not for user's safety.

b) Customer's satisfaction is very important. A product with good quality will have more demands among the customers. Thus, the product would remain further in the market, getting more people involved in purchasing the products.

c) The project management team can keep improving process performance where necessary. The goal should be to avoid problems that can be avoided.

HUMAN RESOURCE MANAGEMENT

The plan for the management of human resources sets out guidelines on how to define human resources for project management. The staffing, management, control and release of the appropriate human resources are also involved.

ROLES AND RESPONSIBILITY

Role	**Responsibilities**	**Team member**
Project manager	-Develop a project plan -Manage deliverables according to the plan -Recruit project staff -Lead and manage the project team -Determine the methodology used on the project -Establish a project schedule and determine each phase -Assign tasks to project team members -Provide regular updates to upper management	Jeyshalini Tevosha

Project team members	-Identify constraints and assumptions -Create the WBS -Participate in risk management process -Attend project team meetings - Cooperate with the project manager's decisions -Recommend corrective actions to the teams if necessary -Accomplish work in the defined project scope	Previna Munuganan Vishwareeta Vanoo Shivedhassen Balasingam

MANAGING THE PROJECT TEAM

The project team should be managed from time to time to avoid unnecessary conflicts between the tasks to be carried out. The team management involves:

a) Involving good communication
b) Using good leadership skills
c) Using negotiation skills
d) Using an issue log
e) Keeping in touch
f) Actively looking for and helping resolve conflicts among the stakeholders.

PROBLEM-SOLVING METHODS

The problem solving methods could include:

a) Define the root problem
b) Analyze the problem
c) Identify solutions
d) Pick solution
e) Implement solution
f) Review solution and validate improvement

COMMUNICATION MANAGEMENT

There are a variety of methods that can be used to communicate among the stakeholders. Some of the methods that will be used in our project are email and meetings(in-person, phone or video chat).

Communication	**Method**	**Frequency**	**Goal**	**Owner**	**Audience**
Project status report	Email	Weekly	Review project statuses and discuss potential issues or delays	Project manager	Project team
Team standup	Meeting	Daily	Discuss what each member's contribution for that	Project manager	Project team

			respective day		
Project review	meeting	At milestones	Present project deliverables, gather feedback, and discuss the upcoming steps	Project manager	Project team
Post-mortem meeting	Meeting	At end of project	Discuss the blockers and obstacles throughout the project, and actionable takeaways	Project manager	Project team
Task progress updates	Email	Daily	Share daily progress	Project manager	Project team

RISK MANAGEMENT

Risk management is the process of identifying, assessing, and controlling potential downfalls and threats in a particular project. Project managers use this process to minimize potential problems that may negatively impact a certain project.

RISK TYPE	RISK	AFFECTS	POTENTIAL INDICATOR	RISK STRATEGY
Technology	-Dataset is not complete, or has many missing data -Software used contains defects	Project, Product	-Late delivery of hardware or support software -Many reported technology problems	-Preprocess data -Check for software defects beforehand
People	-Recruitment of skilled staff -Key staff are ill and unavailable during critical times - Required training for staff is not available	Project, Product	-Poor staff morale -Poor relationship among team -Job availability	-Hire trained and experienced staff -Stress on the importance of teamwork -Always have more than one reliable person to carry out tasks
Organizational	-Organization gets restructured -Financial problems due to project budget	Project, Product, Business	-Organizational gossip -Lack of senior management	-Management should always pay more attention -Budgeting should be done wisely
Tools	-The code generated by CASE tools is inefficient -CASE tools cannot be integrated	Project	-Reluctance by team members to use tools -Complaints about CASE tools -Demands for higher-powered workstations	-Team members should not be reluctant -Always have alternative tools

Requirements	- Changes to requirements that require major design rework are proposed - Customers fail to understand the impact of requirement changes	Project, Product, Business	-Many requirements change requests -Customer complaints	-Explain to customer regarding impacts of requirement changes
Estimations	-The time required to develop the software is underestimated -The rate of defect repair is underestimated -The size of the software is underestimated	Business	-Failure to meet agreed schedule -Failure to clear reported defects	-Plan rationally -Do surveys and studies before final estimation is made

PROCUREMENT MANAGEMENT

Procurement management is when the team is required to purchase, rent, or sign a contract with external resources to meet the project's goal. Procurements are initially identified during the planning stage of the project. There are four main stages in procurement management. They are as follows:

a) **Plan Procurement Management**

   Identify what external resources the team will need, and send out a statement of work detailing the specified needs.

b) **Conduct Procurement**

   When the team receives information/insights from the contractors, analyze them and make a decision which is the best for the team and the project.

c) **Control Procurement**

   Manage the contracts hired and monitor their work to make sure everyone is keeping up with the schedule.

d) Close Procurement

Have a detailed process to make sure contracts have been fulfilled and closed properly.

PROJECT INTEGRATION MANAGEMENT

Project integration management is the combination and coordination of all elements in a project. For instance, coordination of tasks, resources, stakeholders and managing conflicts between various aspects of the project. Project integration management mainly focuses on five elements which are:

a) Initiating

- Develop project charter
- Develop preliminary project scope statement

b) Planning

- Develop project management plan

c) Executing

- Direct and manage project execution

d) Monitoring & Controlling

- Monitor and control project work
- Integrated change control

e) Closing

- Close project

TOOLS AND TECHNIQUES

Knowledge Area	**Tools and Techniques**
Project integration management	Project method selection by comparison, AI technique selection, choosing expert, collecting expect knowledge, stakeholder analyses and project review meetings
Scope management	Work breakdown structures, requirement analysis and Brainstorming
Time management	Gantt chart
Cost management	Cost estimation for application development and AI Model building, cost management and drawing cost baselines
Quality management	AI Model quality metrics, checklists, considering 4 quality management components, Process based quality
Human Resource management	Team member responsibility assignments, carry out problem solving methods and team building exercise
Communication management	Kick-off meetings, Members progress report, Team standup, project review, post-mortem meeting and virtual meetings
Risk management	Risk identifications, risk rankings and risk management plans
Procurement management	Contracts from customers

SUCCESS MEASURES OF THE PROJECT

a. AI Model performance

b. AI Model capability

c. AI Model accuracy

d. AI Model reliability

e. System outcome

f. Objective achievement

g. Customer satisfaction

h. User satisfaction