

SE 216 – SOFTWARE PROJECT MANAGEMENT

SOFTWARE TOOLS DOCUMENT

PROJECT NAME: CodeCraft

GROUP NUMBER and MEMBERS: Group Number 3, Başar Kocabaş, Lorin Erol, Mert Koçyiğit, Mehmet Taşoğlu, Efran Ergelen, Haktan Yolcu

TASK #	PROJECT TASKS WHICH REQUIRE SOFTWARE TOOL SUPPORT
1	Storing and organizing all of the Data
2	Version control and Collaboration
3	Integrating Online AI assistant for the platform

SOFTWARE TOOLS FOR TASK 1:

Tool Cost/Training/Functionality Data

Tool	Google Cloud SQL	Oracle MySQL	MongoDB Atlas	Microsoft Azure Cosmos DB
Cost	\$100	\$179	\$57	\$11
Training Days	15 days	7 days	10 days	21 days
Functionality	70	47	60	88

Normalized Cost/Training/Functionality Data

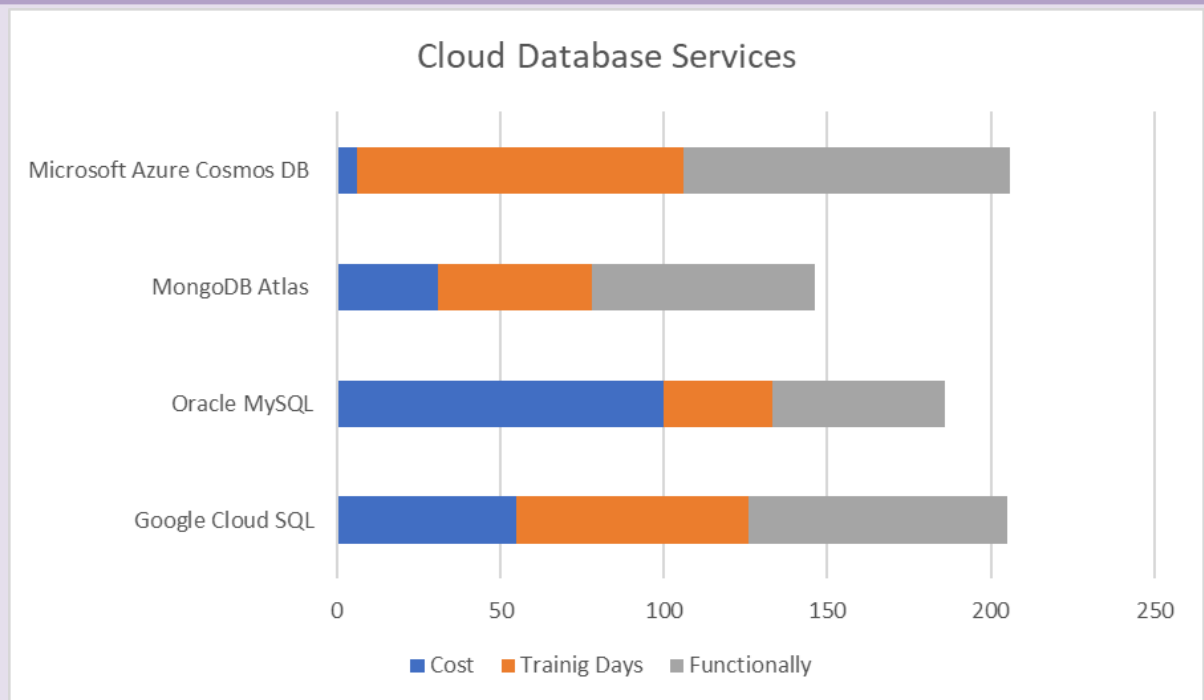
Tool	Google Cloud SQL	Oracle MySQL	MongoDB Atlas	Microsoft Azure Cosmos DB
Cost	55.8	100	31.8	6.1
Training Days	71.4	33.3	47.6	100
Functionality	79.5	53.4	68.1	100

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Normalized Tool Graph

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Which tool has been selected? Why?

Microsoft Azure Cosmos DB has been chosen for its lower cost and supporting open source PostgreSQL, MongoDB, and Cassandra. This noSQLs will be used to keep track of the progress data and other types of non-structured data parts of the project . Google Cloud SQL is also needed to support the design for SQL applications such as usernames, login credentials and other well structured data.

SOFTWARE TOOLS FOR TASK 2:

Tool Cost/Training/Functionality Data

Tool	Github	Bitbucket	Gitkraken	Beanstalk
Cost	Free	Free	\$12	\$15
Training Days	1	1	2	3
Functionality	90	60	60	50

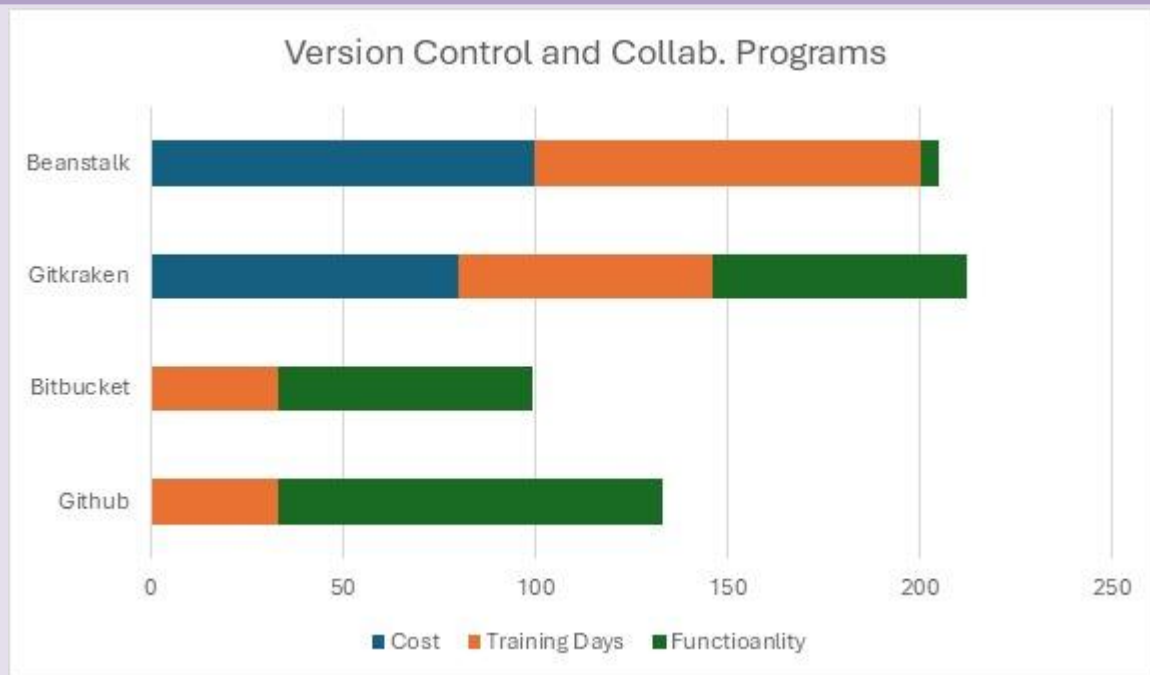
Normalized Cost/Training/Functionality Data

Tool	Github	Bitbucket	Gitkraken	Beanstalk
Cost	0	0	80	100
Training Days	33.3	33.3	66.6	100
Functionality	100	66.6	66.6	55.5

Normalized Tool Graph

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Which tool has been selected? Why?

GitHub has been selected as the primary platform for code collaboration and discussion within CodeCraft. Its high functionality score (90) indicates a robust feature set for version control, pull requests, issue tracking, and code discussions. Notably, GitHub offers a free basic plan, making it a cost-effective solution for our project. This is particularly advantageous considering CodeCraft's development stage. While other tools on the list offer similar functionalities, GitHub's widespread adoption and the potential for a smoother learning curve for our team make it the most suitable choice.

SOFTWARE TOOLS FOR TASK 3:

Tool Cost/Training/Functionality Data

Tool	GPT-4 Turbo	GPT-4	GPT-3.5 Turbo	Gemini
Cost	\$20	\$45	\$1	Free
Training Days	10	7	7	7
Functionality	80	70	60	75

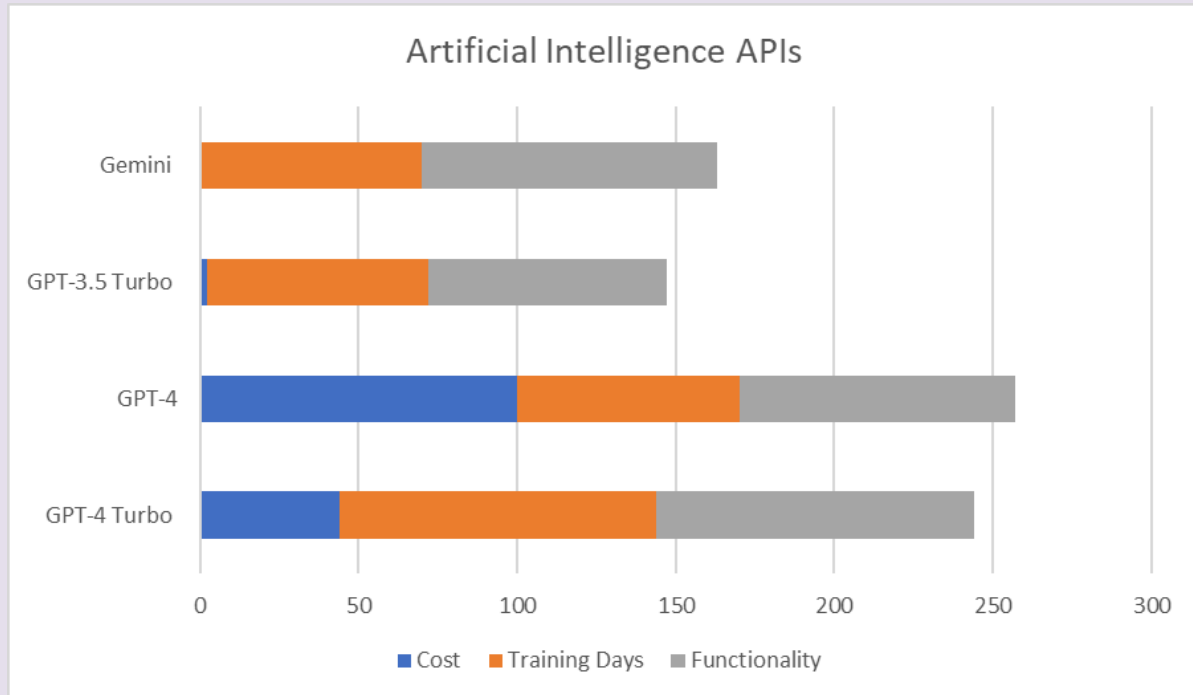
Normalized Cost/Training/Functionality Data

Tool	GPT-4 Turbo	GPT-4	GPT-3.5 Turbo	Gemini
Cost	44.4	100	2.2	0
Training Days	100	70	70	70
Functionality	100	87.5	75	93.7

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Normalized Tool Graph



Which tool has been selected? Why?

Among the evaluated tools, Gemini emerges as the most suitable choice for integrating an AI assistant into the CodeCraft platform. While GPT-4 Turbo boasts the highest functionality score, its estimated cost and training days are significantly higher. Similarly, GPT-4 and GPT-3.5 Turbo come with either a considerable cost or lower functionality.

Gemini stands out for its free access and relatively lower training investment. Despite a slightly lower functionality score compared to GPT-4 Turbo, Gemini can still effectively guide users, optimize code, and fulfill the envisioned functionalities of the AI assistant. This cost-effective solution allows to experiment and explore the potential of AI integration within CodeCraft without a substantial initial investment.