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Business Capstone Review: Analysis of Startups in Technology and Artificial Intelligence

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Business Capstone Review: Analysis of Startups in Technology and Artificial Intelligence

By

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An undergraduate honors thesis

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In

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Abstract

This is a review of the Portland State University's business capstone course. The team was engaged by the client to reach certain goals and deliverables. Key to this project was immense research on startups within the Technology and Artificial Intelligence industry. Information was communicated with the client throughout the project to ensure client relevancy. The research was then used to perform an analysis to measure the potential of startups being a good fit with the client's goals. Upon completion of the project, the team will have presented a full report summarizing the research as well as the final recommendation list of startups.

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The Project

Introduction

The purpose of this report is to provide a general analysis of the Capstone Project ('The Project') conducted by the team. This analysis will aim to provide additional insight into the learning outcomes of The Project as well as what could be changed in the future.

This report will achieve these objectives by first providing an overview of The Project including the general description, the goals and objectives, as well as the relevant scope and timeline. Following this will be a discussion of the process, challenges and solutions, and the outcomes. Finally, there will be the critical analysis of the Capstone, including a discussion of learning and growth opportunities, as well as things that could have been done better.

Case Overview

The client, "Client X", is a multinational semiconductor company. To promote strategic relationships, Client X maintains a program intended for startup companies to join, "Program Y." By joining this Program Y, startups have access to Client X's technology at preferred rates. Clients will also have access to software development kits (SDKs) and other software platforms. Client X held several goals that led them to pursue this engagement. Specifically, the goal was to identify and partner with startups within the Technology and Artificial Intelligence (AI) industry whose technological innovations are compatible with Client X's. By identifying and partnering with these startups, Client X had been planning to create an ecosystem of innovation to build strategic relationships to provide benefit to the client as well as the startups.

In order to realize these goals, Client X defined the desired outcome as a list of twenty startups who show growth potential within a specialized industry. The client also expressed that

in addition to this list, there should be an analysis and discussion around the process of identifying promising startups. This discussion could lead to the adoption of the process by Client X.

Timeline and Deliverables

To prove an understanding of the client's goals and objectives, the team developed a statement of work (SOW) to which the client agreed. As outlined by the SOW, the agreed upon scope of the project can be summarized as four separate tasks.

1. An analysis of the external environment in which startups operate.
2. An analysis of the environment internal to Client X relating to strengths and weaknesses the client has in approaching these startups.
3. An analysis of financial benefit startups might observe when joining the Inception program.
4. A final report summarizing the project and making the official final recommendations.

Tasks 1 - 3 outlined above is where most of the research took place. These analyses were intended to provide the necessary information of critical contextual concepts. They were used to create robust understandings of the startup landscape within the identified industry, the context of Client X in approaching this market, and the benefit Client X was able to offer to startups. This contextual information from tasks 1 – 3 was given directly to the client in three presentations. The final report will go over this same detail in more depth, tying together the project.

The agreed upon timeline for the project is as follows.

Task	Date
Task 1: External Presentation	April 24 th 2024
Task 2: Internal Presentation	May 7 th 2024
Task 3: Financial Presentation	May 28 th 2024
Task 4: Final Report	June 8 th 2024

The Process

The nature of The Project determined that the most significant amount of time and effort spent would be put into research. In order to ensure quality research, it was important to have a guiding process to prevent research from becoming derailed.

This meant that throughout the research process, sources were considered carefully. There was not one specific checklist to determine the validity of a source, but instead evaluation relied on individual judgement based on factors such as credibility, relevance, timeliness, and verifiability.

Because of the extensive information requirements for an effective analysis, data was not located in a central location. This meant that the team had to use a wide variety of sources to build the knowledge base. Sources that were relied upon include news articles, blogs, industry reports, academic papers, and company websites.

Simultaneously while conducting this research, a list of potential startups within the selected industry was created. After analyzing the data that was collected, the team began to arrive at a set of criteria with which to judge startups on their potential for success with Program

Y. These criteria were then applied to the population list to eliminate startups that were determined to be ill-fitting with our goals.

Challenges and Solutions

Even with this process, there were still challenges that had to be overcome to arrive at these outcomes. Perhaps one of the largest challenges that the group had to face was the organization and communication of information. The Project required such an extensive amount of unstructured research that all team members were focused on different areas of research at any given time. This posed a challenge when it came time to relay information between members and create a shared understanding. To overcome this, the team used shared google drives and files in order to work collaboratively and increase organization as well as increasing general communication about topics.

Another challenge that was faced was the complexity of research topics. There were many different paths that could have been taken to arrive at our desired outcome, as well as paths that were dead ends. Ensuring the relevancy of all research conducted was a challenge. To overcome this challenge, the team met consistently to discuss research and recenter around the goals of the project.

In Review

Growth Opportunities

Beyond just the final deliverables and the knowledge required for them, there was learning and growth for the team. One such thing that was learned was the increased ability to communicate effectively with different communication styles. This growth was directly prompted by the challenge of decentralized research. By the end of the project the communication was not perfect, but it was significantly better than it had been at the start.

Working in a setting where there were many different moving parts and team members, makes clearer the similarities between this project and similar projects in businesses. The case project also had a certain uniqueness that added a level of complexity. This complexity forced the application of ideas to be outside-the-box in some cases. This application of principles to non-standard situations was a great growth opportunity for the team. A key example of this

Potential Changes

Teams were organized and split based on individual's fields of study. The team members had areas of study such as business technology and analytics, supply chain management, marketing, management and leadership/human resources, and accounting. This specific case, being as unique as it was, felt as though it was less applicable to certain individuals. There would be additional growth opportunities if this was not the case.

Conclusion

Overall, the project was interesting. As requested by our client, the team was to analyze and identify around twenty startup companies to partner with the client's program, Program Y. To achieve this, the team relied on extensive research from a wide variety of sources to build an effective knowledge base. Throughout this project, there were challenges and complexities that

allowed for the growth of skills among the team. Upon final completion of the project, the team will present the final list of potential partners as well as the final report.

This context helps to understand the impact of the project. Through the challenges the team faced, there were learning and growth opportunities. One skill in particular that observed growth was in effective communication. Through the challenge of working asynchronously, the team was able to experience new challenges in communication and learn how to overcome these. There may have also been additional learning opportunities if the project was more related to a wider range of student majors.