

## Written 2 - Scenario

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You are working with a Halifax-based company that applies deep learning models in underwater environments. *DeepBlue Informatics (DBI)* has grown quickly since its formation in 2018. Company founder Felix Apponi believes the rapid growth resulted from his formula for success: the best science applied by the best people. You are happy to be a part of the company.

Your team leader is Sania Tuli. Sania has been with DeepBlue since it began. She is proud of the company's reputation and committed to DeepBlue's growth. Sania has recently been put in charge of company operations. She is giving you responsibilities for special projects in her department.

Business is booming. DBI is gaining new customers around the world. The company has changed from a one-city startup to more than 700 people working in 11 time zones. New hires are joining at the rate of 10-20 a month. The need for more efficient ways of working has gone from "nice to have" to "must-have." DBI is looking for software solutions to support productivity. Evaluating new tools is part of Sania's responsibilities, as is implementing them after being selected.

The DeepBlue sales department recently asked Sania for help with new customers and together, they implemented a WordPress website. As well as general information, the site provides background papers on deep learning, checklists for using DeepBlue's systems, and documentation for technically-oriented users. Now the sales department wants to improve the site even more, especially with accessibility options. What can Sania suggest?

She thinks natural language processing tools might be mature enough to use for at least first-level customer contact. Felix fully supports the idea. He has challenged Sania to go further, believing DBI's identity as an AI leader will be strengthened by using machine learning systems in as many business areas as possible.

A plan emerges. DBI will start with two types of AI-based tools. The first is a text-to-speech system that makes web content easier to use and speaks in accents suited to customers wherever they may be. The second is an AI-assisted translation tool to make their information more accessible in non-English speaking markets. Sania wants to divide the work with you. She asks you to pick which of these two types of systems you find interesting to assess. She'll do the other one.

You're happy to accept. Before leaving her office, you ask her thoughts about the ideal features for DBI's needs. "Make sure it's easy to set up for us and accurate for our customers," she replies quickly. "Maybe we just start with the general pages, but it would be ideal if it works with our technical documents as well. The rest you'll know when you see what they have that can help us."

You recall from previous projects that Sania is always interested in product support for any new tools the company acquires. Before leaving, you ask for a price range to target. She smiles. “Felix says, and I quote, ‘whatever it takes’ - just find the very best system for us.”

Your task is to:

- Pick ONE of the two types of tools to examine. Either
  - (1) a conversational AI system (see examples in the FAQ below), OR
  - (2) an AI-assisted translation tool (see examples in the FAQ below)
- Determine three contenders as possible suppliers for DBI’s needs. Pick any from the examples provided, or use any others you identify.
- Write a recommendation report that assesses their capabilities and recommends which tool DBI should purchase. Use the sections described below.
- Interpret the facts you gather to arrive at conclusions based on DBI’s needs.
- Make sure the facts in your report support your recommendation(s).

## Written 2 - The report

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The report should present, in this order:

1. **Executive Summary**
2. **Context**
3. **Details**
4. **Conclusions**
5. **Recommendations**
6. **References**

**Note: No other elements are required; for example, no cover page, table of contents, list of figures, etc., is necessary. Provide only these six sections in the order shown.**

The finished report will be a total of 2.5 - 5 pages, not including (1) space for illustrations and (2) a page/pages for references.

This can be broken down as follows:

1. **SUMMARY** - .25 - .5 page
  - Provide a condensed version of the full report - help the reader get the essential content succinctly.
  - Apply the conventions of a summary
  - ***See the lecture and slides from 10 Feb and 15 Feb***
2. **BACKGROUND/CONTEXT** - .5 - 1 pages
  - Write about the reason for the report - help the reader understand why the report is being done and how.
  - Include the essential factors that will influence the decision and be used as the criteria for selection.
  - ***See the lecture and slides from 10 Feb and 15 Feb.***
3. **DETAILS** - 1 - 2.5 pages plus figures and table(s)
  - Provide the relevant technical details for each of the three choices under consideration.
  - Apply the conventions of a summary (for each one).
  - Include facts that will be used in your critical analysis.
  - ***See the lecture and slides from 10 Feb and 15 Feb.***
  - **Provide at least three figures and at least one table:**
    - The figures can be your original work or graphics by others. If using items by others, be sure to cite the source appropriately.
    - Make the table yourself. If using data from others, make sure to cite the source(s) appropriately.
    - Do not use clip art images or figures that add nothing to understanding; for example, avoid using company logos.
    - Make sure the illustrations are labeled correctly, add to the understanding of the details, and are connected to the text.
    - ***See the lecture and slides from 03 Feb. and the textbook pp. 182 - 200 (Chapter 10 - "Technical Graphics")***

4. **CONCLUSIONS** - .5 - .75 page

- Present original insights from critical analysis of the facts presented in the report.
- It can be primarily a bulleted list, mostly a table, text, or any combination.
- Apply the conventions of a summary.
- ***See the lecture and slides 15 Feb.***

5. **RECOMMENDATION** - .25 - .5 page

- Present your recommendation(s) for the tool the company should select.
- Includes (briefly) the next step(s) DBI should take.
- Explains (briefly) why you believe this is the best course of action for DBI.
- ***See the lecture and slides from 15 Feb.***

6. **REFERENCES** - Length as needed

- Use IEEE style.
- ***Refer to the lecture from 17 Feb and coursepack pp. 47-60 for details of correct uses by type of source***

## Written 2 - FAQ

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### 1 - What citation style should I use?

Use IEEE only. Refer to the lecture and slides from 17 Feb and the coursepack pp. 47-60.

### 2 - Is this a .ppt or MS Word or PDF document?

Prepare it using MS Word and then submit as a PDF file.

### 3 - What size font and how much spacing should I use?

For fonts, use either 12-point Times New Roman or 11-point Arial. For headings before each of the six sections named above, use the same font in boldface, 2 points more than the font you use in the body text.

Make paragraphs single-spaced, left-justified, separated by a blank line in between. Make pages 8.5 x 11 inches (22 x 28 cms). Make margins 1-inch (2.54 cm) all around.

### 4 - Should I use paragraphs or bullet points?

Write entire paragraphs except when using a list to draw special attention, e.g., conclusions. For using lists and bullet points, see the coursepack pp. 105 - 113.

### 5 - What are examples of some companies I can use?

See below.

**For Conversational AI** - Use any from here or others you find (total of three)

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Poly - <https://aws.amazon.com/polly/>

Yellow.AI - <https://yellow.ai>

Haptik Intelligent Online Systems - <https://www.haptik.ai>

IBM Watson Assistant - <https://www.ibm.com/products/watson-assistant>

**For AI-assisted translation** - Use any from here or others you find (total of three)

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Language IO - <https://languageio.com>

MemSource - <https://www.memsource.com>

Unabel - <https://unabel.com>

Amazon Translate - <https://aws.amazon.com/translate/>