Mastering Prompt Engineering

Introduction

This seminar provides a practical and accessible introduction to prompt engineering - the craft of guiding Generative AI systems to deliver accurate, reliable, and context-appropriate results. Designed for a broad audience, the seminar requires no technical background. Whether you are a manager, educator, writer, analyst, or simply someone who uses AI tools daily, you will gain the skills needed to structure prompts effectively and receive high-quality outputs. While the seminar is open to all, it is especially valuable for software developers. In software engineering, the precision of Generative AI output is critical. Developers rely on AI to generate source code, validate logic, suggest algorithms, review architecture, and detect defects. In these cases, inaccuracies can lead to failed builds, subtle bugs, or architectural mistakes. Therefore, improved prompt engineering can significantly raise the reliability and productivity of AI-assisted development workflows.

Prerequisites

This seminar was designed for professionals and individuals across domains who seek to improve the quality and utility of Generative AI outputs. It is particularly beneficial for software developers, whose work requires accuracy, reproducibility, and technical correctness. The seminar includes demonstrations, guided exercises, practical examples, and interactive discussions. The seminar will be adjusted and optimized in accordance with the audience. Participants should have access to a Generative AI interface such as ChatGPT, Claude, Gemini, or Microsoft Copilot.

Duration

This seminar includes four academic hours.

Premium Training

This seminar can be delivered either in Hebrew or in English. It can be delivered online or in a hybrid format, allowing participants to attend in person or online. During training, we use a Moodle-based Learning Management System that you can access via a web browser from anywhere. The material on the Moodle-based Learning Management System will remain available for one year. Adjustments and changes, including delivering part of the training online

asynchronously, can be readily implemented in accordance with the <u>Extreme Blended</u> methodology we follow.

The Lecturer

This seminar is delivered by <u>Haim Michael</u>, an experienced, well-known software development trainer with more than 25 years of experience in software development training, with an academic background in Economics and Information Systems Management.

The Seminar Outcomes

By the end of the seminar, participants will be able to:

- · Build effective prompts for a wide variety of AI tasks
- · Identify weaknesses in prompt formulations and refine them
- Reduce AI hallucinations through structured prompting
- Apply prompt-engineering techniques to professional and daily workflows
- Use prompt-verification steps to ensure higher accuracy
- Develop a disciplined, repeatable prompt-engineering approach.

The Topics

This seminar includes the following topics. Changes can be easily introduced. Topics can be taken away. More topics and practical exercises can be added as needed.

- Understanding how Large Language Models interpret prompts
- Techniques for crafting clear, structured, and unambiguous prompts
- Strategies for increasing accuracy and reducing hallucinations
- Step-by-step prompting methodologies (e.g., role prompting, staged prompting)
- Using examples, constraints, and verification loops
- Prompt patterns for non-technical tasks (summaries, content creation, decisions)
- Prompt patterns for technical tasks (code generation, refactoring, testing)
- Measuring and improving the reliability of Al outputs
- · Collaborating with Al systems as iterative partners

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