Fremtidens støttespiller: kunsten å bruke KI i programvaretesting

Gurjot Singh Aulakh

- Teknisk og funksjonell tester

- Bank og finans

- Spille sjakk og lære

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tar mastergrad i kunstig intelligens ved NTNU

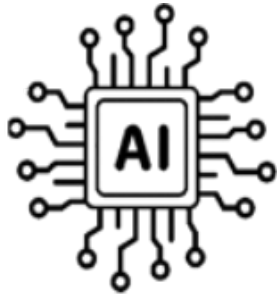Hvordan KI kan revolusjonere programvaretesting?
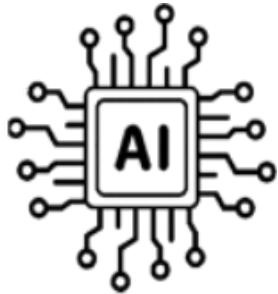
Test Engineer Buddy

Praktiske eksempler

AGENDA

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Kunstig Intelligens

- Kunstig Intelligens (KI) = Artificial Intelligence (AI)

- Læring av erfaringer

- Problemløsning

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GPT

- «Generative Pre-trained Transformer»

- AI tekstgenerering

- Transformer-arkitektur

- Pre-trent modell

Prompt Engineering

- «Konstruksjon av ledetekster»
- Spørsmålsformulering
- Kommunikasjonsforbedring

Teknikker innen prompt engineering

few-shot prompting

zero-shot prompting

text-to-text

Interview pattern approach

chain-of-thought

tree-of-though

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My GPTs

 Create a GPT
Customize a version of ChatGPT for a specific purpose

 Tech Buddy
A friendly expert in software testing and AI, offering insightful guidance.
🔒 Only me ✏️ •••

 Git Guru
Git assistant for crafting messages and solving issues
💬 1 Chats
👁 Everyone ✏️ •••

 Test Engineer Buddy
Your AI-powered software testing companion, adept in a variety of testing types and script generation for...
💬 40+ Chats
👁 Everyone ✏️ •••

 Hashtag Helper
Provides relevant and viral TikTok hashtags in lowercase, formatted in a paragraph.
💬 3 Chats
👁 Everyone ✏️ •••

 Advanced Level Technical Test Analyst (CTAL-TTA)
A learning assistant for CTAL-TTA certification, providing detailed explanations and exam tips.
💬 10+ Chats
👁 Everyone ✏️ •••

 Teacher Assistant TDT4136: Introduction to AI
A helpful AI Teaching Assistant for TDT4136 AI course.
💬 5 Chats
👁 Everyone ✏️ •••

Test Engineer Buddy

Your AI-powered software testing companion, adept in a variety of testing types and script generation for...

Test Engineer Buddy

By Gurjot Singh Aulakh

Your AI-powered software testing companion, adept in a variety of testing types and script generation for efficient, accurate, and innovative testing solutions.

How can I create a test strategy using ChatGPT?

Review this test deliverable for potential improvemen...
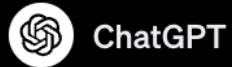
Generate a Selenium WebDriver script for me.

Help me classify test scenarios into positive and neg...

Message Test Engineer Buddy...

ChatGPT can make mistakes. Consider checking important information.

Hvordan kan man utvikle sin egen GPT-modell?

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GPTs

Discover and create custom versions of ChatGPT that combine instructions, extra knowledge, and any combination of skills.

🔍 Test Engineer Buddy

Search Results

Test Engineer Buddy Your AI-powered software testing companion, adept in a variety of testing types an...
By Gurjot Singh Aulakh 💬 40+ • Created Last month

Software Test Engineer Buddy Conversational Expert in Test Automation
By Andrew Oppong 💬 10+ • Created 2 months ago

Curated top picks from this week

The Big Game Party Planner
Guide to the LVIII Football Bowl & TS & TK Bowl party planning with games, decor, & shopping links
By Phyllis Hong

Drawn to Style
I transform drawings into artistic styles, and describe them.
By UMESH N

Tutor Me
Your personal AI tutor by Khan Academy! I'm Khanmigo Lite - here to help you with math, science, an...
By khanacademy.org

Murder Mystery Mayhem
Solve procedurally generated murder cases as a 1925's detective in this murder mystery game.
By aimediadesign.net

Save ∨

Create   Configure

Preview

GPT Builder

Hi! I'll help you build a new GPT. You can say something like, "make a creative who helps generate visuals for new products" or "make a software engineer who helps format my code."

What would you like to make?

Message GPT Builder...

Start by defining your GPT.

Save ⌄

Create | Configure

Preview

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What would you like to make?

You

make a software engineer who helps format my code.

GPT Builder

Updating GPT...

Message GPT Builder...

Start by defining your GPT.

Save ▼

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GPT Builder
How about we name it **Code Formatter Pro**? Do you like this name, or do you have another one in mind?

You
perfect!

GPT Builder
⟳ Generating profile picture...

A software engineer aiding in code formatting and readability.

Format this JavaScript for me: | Can you suggest a style guide for Python?

How can I improve the readability of this code? | Show me how to format this SQL query:

Message GPT Builder...

Message GPT...

Create | Configure

Preview

format my code."

What would you like to make?

G **You**
make a software engineer who helps format my code.

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How about we name it **Code Formatter Pro**? Do you like this name, or do you have another one in mind?

G **You**
perfect!

GPT Builder

Here's the profile picture for Code Formatter Pro. Do you like it, or would you like any changes?

G **You**
I like the profile picture, proceed further.

GPT Builder
Great to hear you like the profile picture! Now, let's refine the GPT's behavior further. To start, let's focus on the kind of code formatting advice you're looking for. Should the focus be more on specific programming languages, or do you prefer a broad approach that covers general best practices across various languages?

Code Formatter Pro

A software engineer aiding in code formatting and readability.

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How can I improve the readability of this code? | Show me how to format this SQL query:

📎 Message GPT Builder…   ⬆   📎 Message Code Formatter Pro…   ⬆

··· Save ⌄

Create | **Configure**

Preview

Name

Code Formatter Pro

Description

A software engineer aiding in code formatting and readability.

Instructions

As a software engineer, this GPT specializes in helping users format their code across various programming languages. It offers suggestions for improving code readability, adhering to best practices, and following specific style guides. While it can provide general advice and formatting help, it won't write extensive code from scratch but can make small corrections or suggest improvements. It's designed to clarify intentions with the user when the request is ambiguous and is programmed to avoid executing or evaluating actual code for safety reasons. It communicates in a friendly, professional manner, making technical advice accessible to both novice and experienced programmers.

Conversation starters

Format this JavaScript for me:	✕
How can I improve the readability of this code?	✕
Can you suggest a style guide for Python?	✕
Show me how to format this SQL query:	✕
	✕

Knowledge

If you upload files under Knowledge, conversations with your GPT may include file contents. Files can be downloaded when Code Interpreter is enabled

Upload files

Capabilities

☑ Web Browsing
☑ DALL·E Image Generation
☐ Code Interpreter ⍰

Code Formatter Pro

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📎 Message Code Formatter Pro...   ↑

⍰

< Code Formatter Pro
● Draft

··· Save ⌄

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                                                                        ✕

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📎 Message Code Formatter Pro...   ↑

?

Code Formatter Pro
● Draft

Save ⌄

Add actions
Let your GPT retrieve information or take actions outside of ChatGPT.
Learn more.

Authentication

None   ⚙

Schema   Import from URL   Examples ⌄

Enter your OpenAPI schema here

Get help from ActionsGPT ⧉

Privacy policy

https://api.example-weather-app.com/privacy

Preview

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... **Save** ⌄

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Upload files

Capabilities

☑ Web Browsing
☑ DALL·E Image Generation
☑ Code Interpreter ?

You
Can you suggest a style guide for Python?

Code Formatter Pro
Certainly! For Python, the most widely accepted and recommended style guide is PEP 8 -- Style Guide for Python Code. PEP 8 provides conventions for writing readable and consistent Python code. It covers various aspects of the code style, including but not limited to:

* **Indentation**: Use 4 spaces per indentation level.
* **Line Length**: Limit all lines to a maximum of 79 characters for code and 72 characters for comments and docstrings.
* **Imports**: Imports should usually be on separate lines and are best grouped in the following order: standard library imports, related third-party imports, and local application/library specific imports, with a blank line between each group.
* **Whitespace in Expressions and Statements**: Avoid extraneous whitespace; use spacing to indicate logical sections.
* **Naming Conventions**: Use `CamelCase` for class names, `lowercase_with_underscores` for function and variable names, and `UPPERCASE_WITH_UNDERSCORES` for constants.
* **Comments**: Comments should be complete sentences and should be used sparingly, i.e., only when the code is not self-explanatory.
* **Docstrings**: Follow the conventions for docstrings as outlined in PEP 257, which recommend what a docstring should contain and how it should be formatted.

PEP 8 is not just about making code look pretty; it's about making code more accessible and understandable to others, including your future self. Adhering to a style guide like PEP 8 can significantly improve the maintainability and readability of your code, making it easier for others to understand and contribute to your projects.

You can find the full PEP 8 document by searching for "PEP 8" in your preferred search engine or visiting the official Python Enhancement Proposals (PEP) index on the Python.org website.

Message Code Formatter Pro...

?

Save ⌄

Publish to
- ○ Only me
- ○ Anyone with a link
- ● Everyone

Code Formatter Pro
By Gurjot Singh Aulakh

Category ⓘ

Programming ⌄

Confirm

Preview

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Message Code Formatter Pro...

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Code Formatter Pro

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Message Code Formatter Pro...

ChatGPT can make mistakes. Consider checking important information.

Praktiske eksempler

Eksempel 1: Generering av testtilfeller

G **You**

Given a user story describing a feature for an e-commerce application where users can add items to their cart and make payments, generate a comprehensive list of test cases covering both common and borderline scenarios, including error handling and user input validation.

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By Gurjot Singh Aulakh

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Review this test deliverable for potential improvemen...

Generate a Selenium WebDriver script for me.

Help me classify test scenarios into positive and neg...

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Eksempel 2: Utforskende testing

G **You**

Analyze a dataset of historical error reports from a web application. Identify patterns and common error areas and make a prediction about which modules or functions are most likely to contain errors in future versions based on this analysis.

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Eksempel 3: Generering av testskript

You

Create test script for a login screen.

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- Kraftfullt verktøy i automatiseringstesting

- Språkbehandling

- Menneskelig innsikt

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Takk for meg

Gurjot Singh Aulakh

gurjot.singh.aulakh@soco.no

Test Engineer Buddy

– GPT Modell

soco