

Working with AI in a project

Improving the Grand Prix experience
for F1 viewers at home

S8 Graduation FHICT

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Introduction

In 2023, AI became more accessible to the public. I decided to acquire ChatGPT+ to find out if AI could assist me with development related projects, so I tried it during my internship assignment. In this document, you'll read how I used ChatGPT this project and how it assisted me with realizing an all new liveblog for RN365.

Increased productivity

The main takeaway from using ChatGPT during a project is the increased productivity it comes with. I noticed there are three main scenarios when I used ChatGPT:

- When I need answers on questions fast.
I started using ChatGPT as a search engine for questions that have a simple answer. When I don't know what a switch-case loop looks like, I could just go to google, type a prompt, find a good search result, then search the website to find my answer. All this while I only have to give ChatGPT a prompt and it gives me a really well structured answer. Therefore, it saves time and effort.
- When I need feedback, or a different view on my work.
I regularly asked ChatGPT for feedback on my documents or on my code. ChatGPT can provide really valuable feedback, but it takes some judgment to know what feedback is valuable and what feedback should not be applied.
- When I'm stuck and don't know how to approach things.
Sometimes I don't know how to set up a document for example. This was the case with my reflection documents. I wanted a different reflection and retrospective approach than other semesters. I explained to ChatGPT what I didn't like about my current way of reflecting and explained the situation. Next, ChatGPT gives me a few topics for a different reflection method. Some topics it gave were a bit overboard and I didn't include them in my reflection document. And while writing the document, I felt like I missed certain topics, which I added myself. Therefore, I use ChatGPT more as a source of inspiration for when I'm stuck.
- For tasks that take up a lot of time that can be completed by ChatGPT.
I used ChatGPT a lot as a coding assistant. One specific case in my project is where I needed 20 different expressions of an event during the race, varying from least exuberant to most exuberant, and I needed to use certain variables

in these sentences and the sentences had to be inside of an array. Explain this to ChatGPT and it gives exactly what you need without even writing a word of it yourself. Another example is simple functions. When I need a function that converts a specific timestamp to milliseconds, I could go and puzzle the function myself. Or I can explain to ChatGPT what I need and what the timestamp looks like and it gives me the perfect answer.

ChatGPT as a coding assistant

I have already explained a little bit above how I use ChatGPT as a coding assistant for writing simple functions or code examples, but I have used ChatGPT for so much more in my code.

I have never done any backend development before. However, my project required a large backend script to detect events happening during the race. I first assumed this script would take a lot of time to sort out and build, but ChatGPT just made it so much easier. Each function that detects an event happening is written largely by ChatGPT, I just made it work with the already existing code.

Getting all these functions to work in the same script was the most difficult to achieve. But again, you copy the code to ChatGPT, explain what goes wrong and ChatGPT points out the errors or steps to debug.

Refactoring code is also really valuable. As a starting developer, I just don't yet know all the best practices for coding. When I copy and paste my code in ChatGPT and ask it to improve or refactor it, the code comes out much cleaner and more efficient.

Custom GPTs

Since I've acquired ChatGPT+, I can now make my own GPTs and they're awesome. One experiment I did with these GPTs is my own internship manager. John came with

the idea to put the vast amounts of documentation I generated this semester in a GPT to make it more comprehensible for my portfolio. It is as easy as uploading the documentation and with a bit of experimenting and tweaking I managed to explain the GPT what it's purpose is, what the learning outcomes for my semester are and how the assessment of my graduation works. Now, my custom GPT can assess my internship according to my documentation. Which is quite cool in my opinion.

Another case where I made a custom GPT is for the presentation at my graduation conference. I want to use this GPT as an assistant for making two videos that I'll use to explain my concept. This way, I can avoid having to explain the context every time I start a new chat with ChatGPT since this GPT remembers the instructions and tasks I gave it.

Afterwards, I actually hoped that I also made a custom GPT about my entire internship project. Constantly having to explain what kind of project I'm doing for each chat I have started would have saved me quite a bit of time and effort.

My opinion about the use of AI

I can say that I'm happy to witness the introduction of AI during my career instead of starting my career with AI already fully integrated in my field of work. It feels like I left the heavy thinking to ChatGPT this semester, but the benefit of knowing how code works makes AI extra beneficial because I can validate myself what ChatGPT outputs. I can imagine that someone starting his career will immediately rely heavily on AI in their projects without actually knowing what the code does. This could make debugging more difficult for example.

I definitely don't disapprove the use of ChatGPT as it allows people to be more productive, but people will start building stuff they don't really understand and I'm curious to see how the educational system within IT will deal with this.

Some people will say that using ChatGPT to generate code is plagiarism, but I disagree with this. I can remember having a test for informatics in high school about php on paper. If you forgot a semicolon, that would be seen as a spelling error. But with modern IDEs, the exact notation of code doesn't matter anymore because we already have so much assistance in writing code. Code formatters make our code readable and efficient, snippets give us little templates for elements and function and errors get automatically highlighted in the IDE, so there's already so much more assistance compared to my paper php test in high school that knowing the exact notation in code doesn't matter anymore. The next step is AI that generates entire scripts based on a simple prompt and in my opinion, this is the same kind of assistance as we already have in our current IDEs.

Summary

I started working with AI this semester, primarily with ChatGPT. ChatGPT has had a tremendous effect on my productivity and allowed me to build the new liveblog as I have designed it in the concepting phase.

In this document, I explained how I used ChatGPT as a search engine, for feedback on my work, when I don't know an approach for things and for code related assistance. I also included how I made custom GPTs to summarize my documentation for assessment and that I made a GPT to assist me with the production of two videos that I'm planning to make for my presentation at my graduation conference. I also included my ethical opinion of the use of AI as a coding assistant.

Learning Outcome Clarification

- Learning Outcome 5: Personal Leadership
- Learning Outcome 3: Future-Oriented Organisation

Learning outcome 5 applies to this deliverable as I wanted to learn to use AI to speed up my workflow this semester. Therefore, I paid attention to your own learning ability.

Learning outcome 3 applies to this deliverable as I considered ethical perspectives of the use of AI in projects.