# Intelligent cloud applications essay Cloud + AI

## About the author

Since the essay is about my own personal opinions, I would like to start from the most defining subject; me. My career so far has consisted mostly of tweaking monoliths, building small helper programs, and implementing integrations. Up until about a month ago I had very little hands-on experience with AI. The closest thing to cloud architecture has been reaching out to them through some REST Api.

## Interesting cloud opportunities

### Accessibility

For me one of the best things about cloud architecture is the low barrier of entry for users. There might be no need for any installation, just a browser can be sufficient. Having to download an installer has left many programs unacquired. In addition, the software is accessible from any device with internet access.

It’s not only users and user acquisition that benefits from lack of installation. Countless workdays have been lost because a feature worked on my computer and gives errors when tested elsewhere. Countless more because project managers, QA-engineers, or customers themselves try to install the houses of cards of software that companies are peddling. Too often a wrong version of a dll is used, or poorly replaced. Of course, cloud can’t completely solve these problems, but any help is welcome.

### Security

Cloud services are often more secure than a server on a customers site. This is because they absolutely must be secure. A few customers having their data stolen is bad press, 40000 customers data stolen is prison for the management.

Customers can benefit from the best professionals designing secure systems for them. Cloud security systems are much easier to keep up to date than have all customers update their systems. A single system is also much easier to test. I suspect that penetration testing will be a much bigger industry in the future.

### Payment structure

Many cloud services charge based on the amount of processing used. This offers a nice way for companies to have all the power in the world while only paying for the amount they use. It also aligns cloud service providers’ and customer’s goals. The more business the customer can do, the more services they will need from the cloud. For every euro you make, you give 2 cents to the cloud provider.

This payment structure is very nice on paper. In reality this makes me shiver. The model is unpredictable and makes me think of ways to cut costs by reducing testing etc.

### Version control

With traditional software you can have dozens of different versions of your software being used by your customers. This can cause issues when a bug needs to be fixed in a specific older version or a long-abandoned feature needs to be updated into the latest version. Cloud allows a very simple solution to these issues. You can have all your users be using the same version running in the cloud.

Like with all things related to programming, bad design can ruin a good idea.

## AI in cloud

AI has benefited greatly from powerful cloud infrastructure. Combination of accessibility and being able to run the resource intensive algorithms in the first place has made AI thrive. ChatGPT has catapulted AI into mainstream culture. ChatGPT has become almost synonymous with AI in certain settings.

Also, from a technical standpoint it cannot be understated how significant ChatGPT, and language models in general, are and will be. Elon Musk has been killing monkeys to create a better interface between computers and people. His Neuralink may someday offer the next step, but a well working language model is one part of a puzzle we have today.

I can see many companies using language models as one part of their apps. They have been a key component in virtual assistants. While they are a bit underwhelming now, I have no doubt voice recognition will be more prevalent in the future.