

What I wish I had known before starting my PhD

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- Creativity
- Persistence
- The human side of research

Creativity

The most important skill you need.

Historical evidence of the power of creativity

- Penicillin (Investigating bacteria)
- Microwave (Improving radars)
- Teflon (Improving refrigerators)
- Viagra (Investigating hypertension)

Before and after

- Taking advanced courses in machine learning and information security.
- Read papers until I was able to reproduce every proof in it.
- Developing complicated solutions for variations of popular problems.
- Taking courses on areas that are related but not on my research focus.
- Read papers until the main ideas were clear.
- Discovering new and relevant problems with simple solutions.

Persistence

A PhD is not only an intellectual challenge, but also a psychological challenge.





This incubation period is daunting.

Strategies to keep going

- Talk about it
- Practice optimism and gratitude
- Meditation

The human side of research

Conclusion

- When tempted to find a complicated solution, try instead to find a more interesting problem.
- Find strategies to maintain an optimistic and hopeful attitude.
- More than a researcher, you are a human. Learn what makes you truly happy and use that to make better decisions.