



# JOIN THE FEMALE-LED HACKATHON

1 - 2 NOVEMBER, EVENTFORUM BERN

Dare to join!





#### Who am I?

- Researcher, PHD Student Center for Micro- and nanoscale dynamics of dispersed systems, 2016
- TA, Data Science consultant, 2019
- Program Manager, Data Science, CA, 2022
- Z by HP Global Data Science & Al Ambassador, 2023
- HerHack Facilitator 2022, 2024



Ekatherina Butyugina





Katharina Fürst



Kunal Sharma, Ph.D

#### Who we are?

#### **High-Impact Technology Education!**

**We offer** immersive technology <u>programs</u> and topic-specific short courses for:

- Individuals looking to boost their careers
- Companies seeking to reap its benefits

We are in: Zurich, Munich, Bremen, Remote

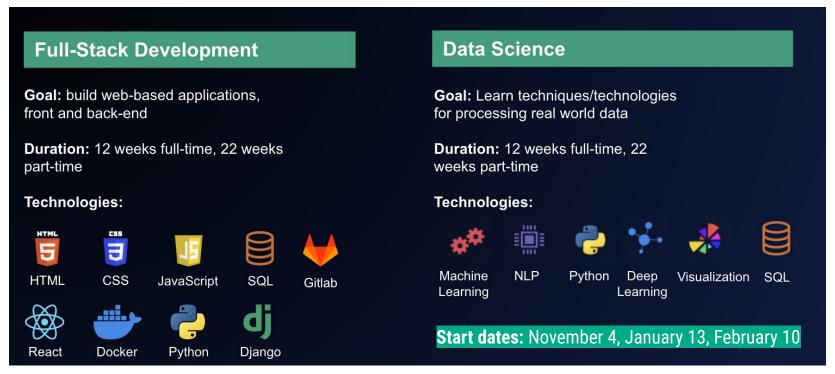
Facts: 1200+ graduates, 200+ projects,

50+ instructors

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# Career programs



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#### Short courses

#### **Python Programming**

**Goal:** Learn the basics of Python programming from beginner to advanced level

**Duration:** 6 weeks - Tuesday and Thursday evening

Technologies:



#### **Mastering Generative AI**

**Goal:** Learn about Al tools, how they are built, and how to integrate them into other applications

**Duration:** 6 weeks - Tuesday and Thursday evening

#### Technologies:



Mid-journey





Hugging Face





# Agenda

17:30 - 18:00 Information & Intro

**18:00 - 18:20** LLM + Streamlit App (Colab, Python)

18:20 - 18:30 Help + Q&A

18:30 - 18:50 Deploy on cloud

18:50 - 19:00 Help + Q&A

19:00 - Closing



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# Prototyping: Hackathon and Real Life

- Find Important Problem
- Team
- Focus on Business Value: How can you solve someone's problem with data?
- Visualize and/or Demonstrate

Hackathon 2 days
Real Life 1-3 months





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### Prototyping:

#### Hackathon and Real Life

**Streamlit** Low-Code Examples

1) Final Project: Rolos + Nascar

2) Generative AI: Chat with the docs

3)\* Chat with your docs: File Q&A with LLMs

\*needs powerful GPUs to run, like <u>ZbyHP</u> workstations, more information in this <u>Github</u>, and <u>Medium article</u>





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#### What is Streamlit?

Streamlit is a Python library that allows the creation of interactive, data-driven web applications in Python.

#### Resources

- Streamlit Documentation
- Cheat sheet
- Book (Getting Started with Streamlit for Data Science)
- Blog (How to master Streamlit for data science)

#### **Deploy**

You can quickly deploy Streamlit apps using <u>Streamlite</u> <u>Community Cloud</u> in just a few clicks. Free of charge

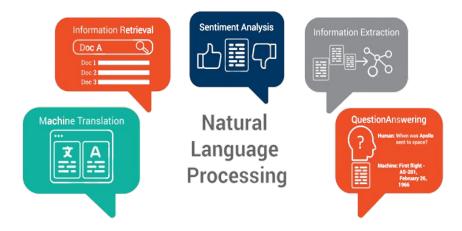
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#### What is LLM?

Large Language Models are AI models trained on vast amounts of text data to understand and generate human language. They can be used for a variety of tasks such as natural language processing (NLP), text generation, summarization, question-answering, etc

**NLP and LLMs are used in**: social media, healthcare, finance, marketing, etc.



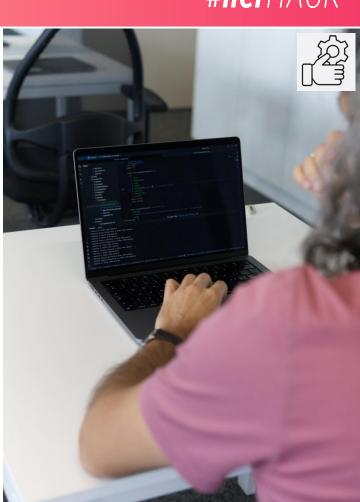
**Documentation and Tutorials:** Comprehensive documentation on using pre-trained LLMs such as GPT, BERT, and more. <u>Hugging Face Docs</u>

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### Deploy File Q&A ChatBot using OpenAI API

- ☐ Install requirements
- Open an HTTPs tunnel
- ☐ Run your app
- ☐ Use OpenAl credentials to get an API key
- ☐ Deploy your "File Q&A ChatBot" step by step
- Get the notebook from <u>HERE</u>
- Run it on Colab by copying to your drive or local system & follow along with the instructor

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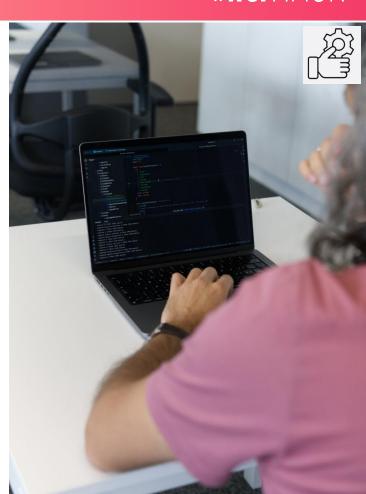
#### Exercise: Improving your ChatBot

- Build your own app and share the link
- Increase the length of the answer by checking parameters <a href="here">here</a>.
- Add functionality of parsing PDF files. Check the documentation <a href="here">here</a>.

**Bonus**: deploy your code using GitHub and Streamlit cloud by following <u>these instructions</u>. Be mindful of the API KEY, don't let any of those go to the public resources.

**Solution:** will be published <a href="here">here</a> (after the workshop)

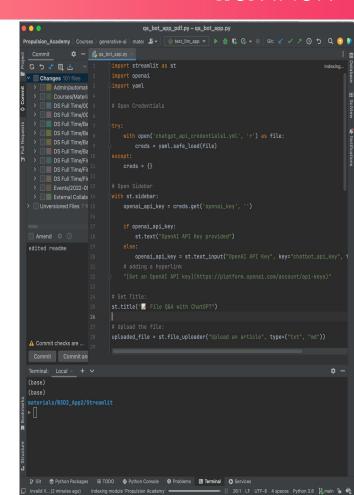
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#### **Notes**

- To develop a Python app, normally you would use <a href="Pycharm">Pycharm</a> or <a href="VScode">VScode</a>. Colab is good for demos and trials
- To get your own OpenAl API key please go here
- To run local models from <a href="Hugging Face">Hugging Face</a> (like Llama, Mistral, Gemma) you'll need a local GPU, like in <a href="ZbyHP">ZbyHP</a> workstations (more information in this <a href="Github">Github</a>, and <a href="Medium article">Medium article</a>)
- ☐ To deploy LLM-powered applications use platforms like Hugging Face Spaces, AWS Sagemaker, or Streamlit
- ☐ GitHub version control, build, ship, and maintain code

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# **Upcoming EVENTS**

17 October, 5:30-7 pm: HTML & CSS Fundamentals
18 October, 08:15-08:35 am: Prompt Engineering, CA
22 October, 5:00-7:30 pm: Rapid Prototyping with
Figma for UX/UI Design: From Idea to Live Solution
24 October, 6:00-7:00 pm: Pitching Techniques

We hope you learnt something new today. Do check out our programs on Data Science and Generative Al!

Hot offer : 10% discount for our courses!

Promo Code: HERHACK2024

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# Thank You! Questions?

