Seek Answers on Oncology with Machine Learning

Digital Health against the Cyberchondria

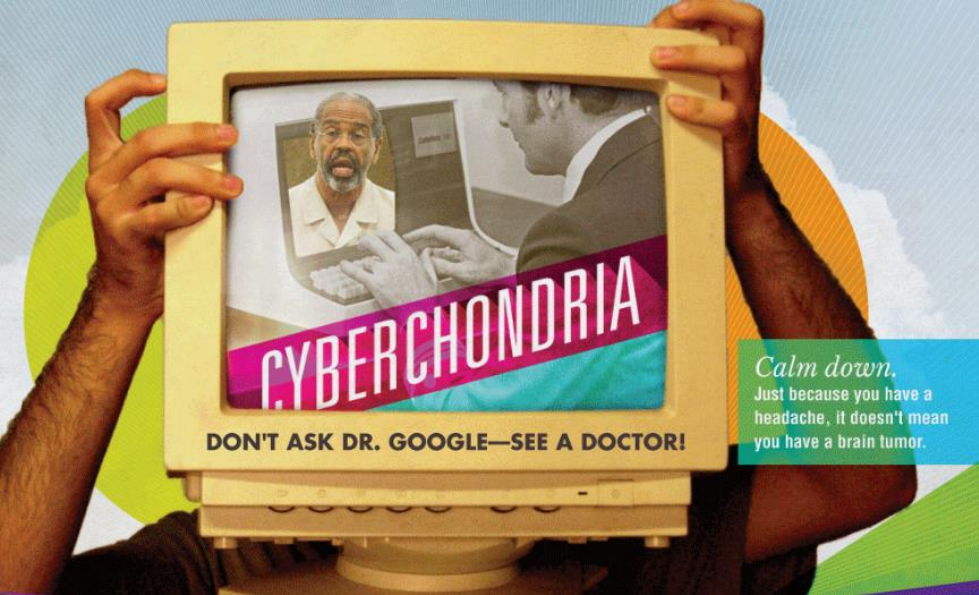PYCON (IT)

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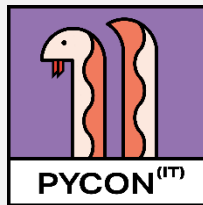
What's Cyberchondria?

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"

Cyberchondria:

"the excessive use of internet health sites to fuel health anxiety"

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Calm Down

- 25% of web searches for "**HEADACHE**" pointed to a **brain tumors** as possible cause but <1 in 50K people develop brain tumors

- ~7% of daily Google's searches belong to health-related searches, which account for about 70,000 searches per minute (2019) and pandemic has increased the number

- Cyberchondria may ruin doctor-patient relationship

- **the cost of cyberchondria** is difficult to estimate for the health care system

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Ask a Real Doctor but on the Internet!

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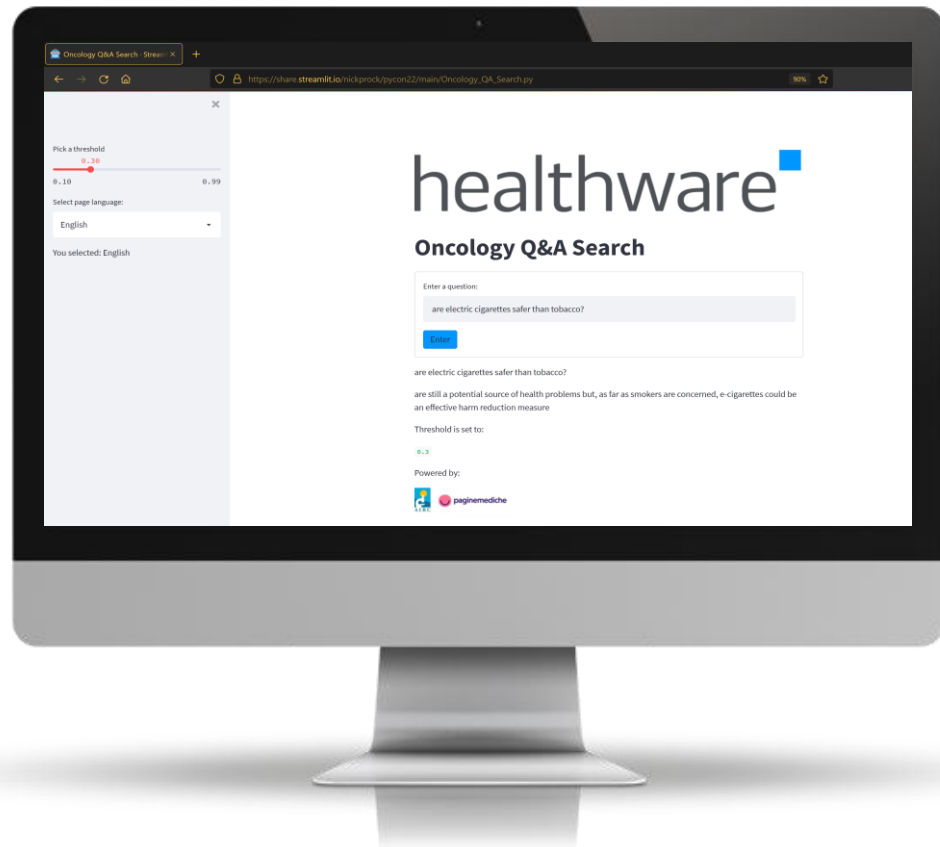## The leading Italian platform for telemedicine and digital health services
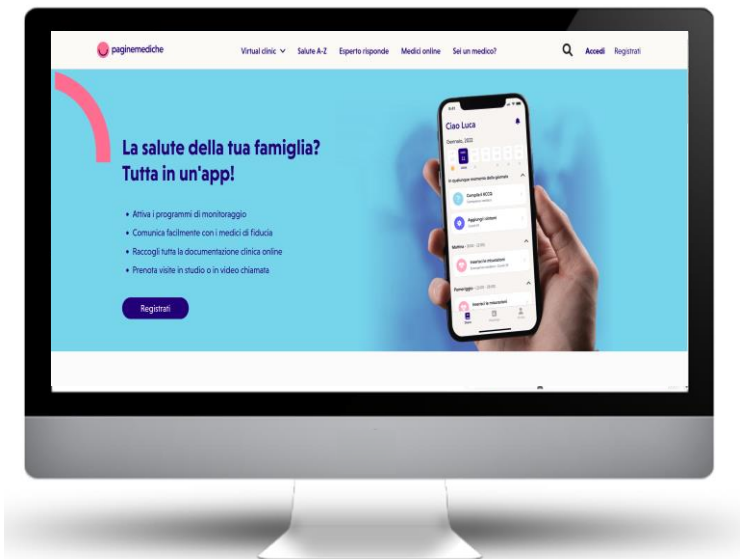
3 M+
MONTHLY USERS

12.000+
PHYSICIANS
FOR TELEMEDICINE SERVICES

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Towards a new search experience

- A BERT-based search engine for Q&A:
  - Built by using 🤗 Hub
  - Cosine distance
- Simple and Multilingual
- Certified answers
- Non-Euclidean space navigation:
  - UMAP Embeddings
  - Harvesine metric
- Clustering Q&A:
  - GMM
  - HDBSCAN

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Oncology Q&A Solution
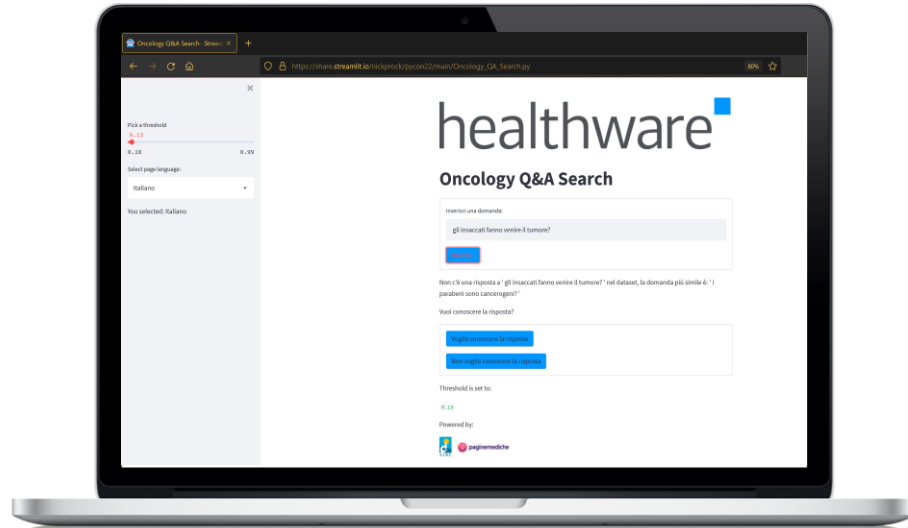
Next Steps

Work in Progress

- Improve Performance

- Better UX/UI

- Consolidating the pipeline

- New Features like:
  - Search by Tag
  - Auto-Tagging
  - Topic Detection

- Come out of the box:
  - Expand the Q&A base
  - Generalize the system:
    - for different tasks
    - for other devices

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03

Company & Team

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The full-service healthcare consultancy of Healthware Group

We play at the intersection of science, creativity, boundless curiosity, and our understanding of human needs.

That's how we design transformational healthcare experiences that engage, simplify and empower people's lives.

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PyCon22 Team

Nicola Procopio
Sr Data Scientist

nicola.procopio@healthwareinternational.com

https://it.linkedin.com/in/nicolaprocopio

https://github.com/nickprock

Carlo Ronsisvalle
Jr Data Scientist

carlo.ronsisvalle@healthwareinternational.com

https://it.linkedin.com/in/carlomronsisvalle

https://github.com/carloronsi

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@healthware_intl | @healthware_ita
linkedin.com/company/healthwareInternational/
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