

# SID 2024

Sibiu Innovation Days

24-25 October, Sibiu - RO

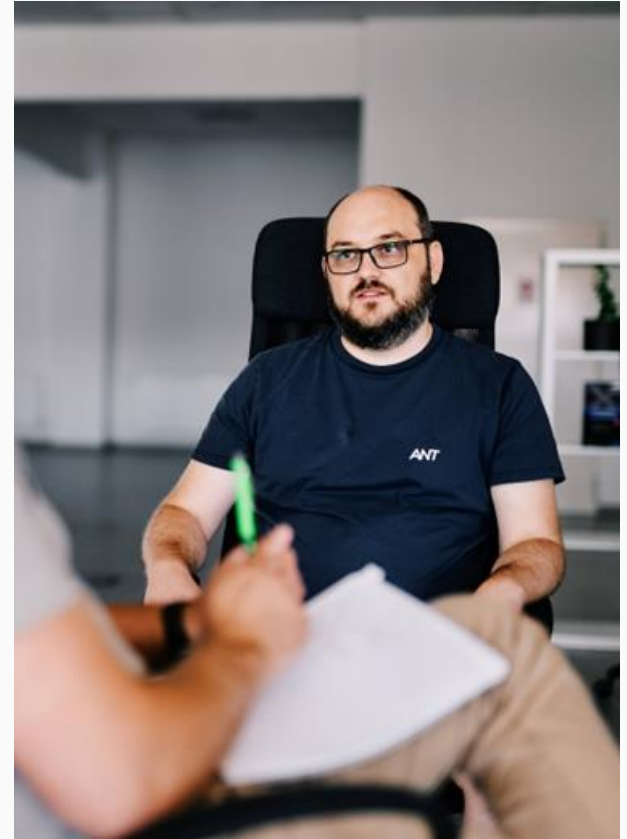


Școala  
informală  
de IT

## Empowering Tomorrow: Lifelong Learning and the Future of Skills Development

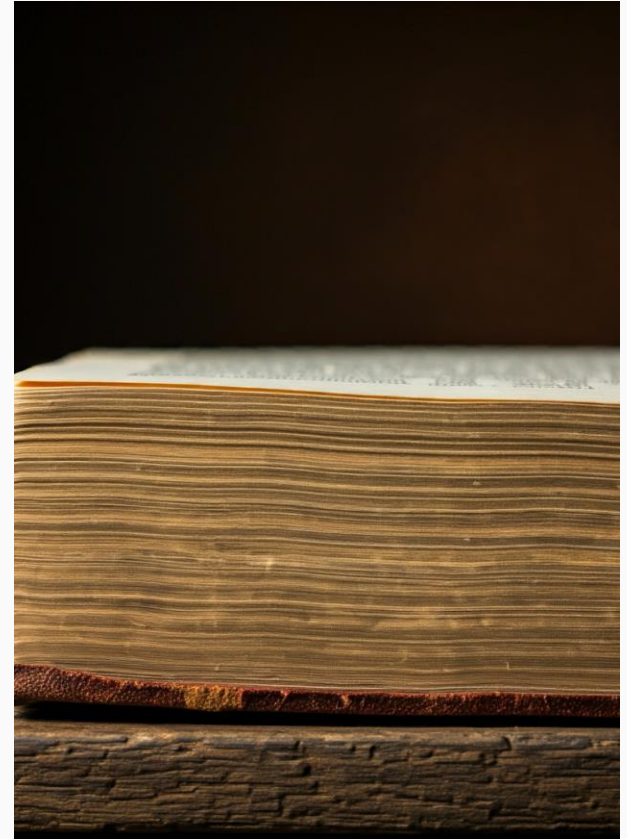
# About me - Viorel Bota

- Mentor at Școala informală de IT
- Associate university teacher
- Integration Solution architect at ANT
- Volunteer at Little Dragons Coder Dojo
- Volunteer at Caragiale Coding Club
- Volunteer at Sibiu IT Cluster
- Passionate about IT and Education



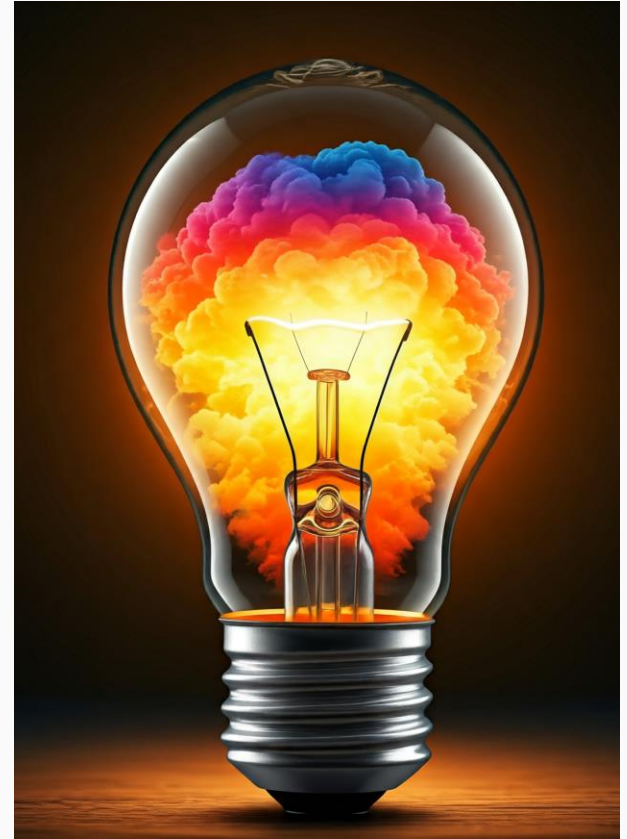
# What is Lifelong Learning?

- Lifelong learning is the **continuous** acquisition of **knowledge** and **skills** throughout one's life.
- It empowers people to **adapt** to a rapidly changing world and remain **competitive**.



# The Pace of Innovation

- Invest in **knowledge** & innovations
  - Apple - 95500 patents - 81% are active
  - Google - 117979 patents - 70% are active
  - Microsoft - 107170 patents - 65% are active
- 3.46 million patent application in 2022
- 1.8 million patents were granted worldwide in 2022
- **5.66% average annual growth rate** in granted patents



# Knowledge Drives Growth

- Foster a **knowledge** acquisition and dissemination **culture** to sustain **growth**
- “Upskilling for Shared Prosperity” (2021) - World Economic Forum
  - investment in upskilling potential to **boost GDP by \$6.5 trillion** by 2030
- Fast-changing pace of innovation translated into the **need for an adaptable workforce**



# Lifelong Learning is Essential

- “The Influence of Information Communication Technology Development on Income Inequality” (2020)
  - Lack of access to information is closely related to income distribution
- “Future of Jobs Report” (2023) - World Economic Forum, 803 companies, 27 industries, 45 economies
  - 23% of the jobs will be lost over the next 5 years
  - 60% of workers will need to be trained by 2027
  - technology literacy is the third-fastest growing core skill



# Deliberate Action is Required

- “Deliberate Practice and Acquisition of Expert Performance” (2008)
  - People tend to improve up to the minimal level required to get the job done
  - To become an expert, **deliberate actions are required**
- Companies and individuals should invest in programs that are specially designed to
  - address short and long term needs
  - are based on real experiences
  - enable translating knowledge into ability



# Facing the Flood of Information

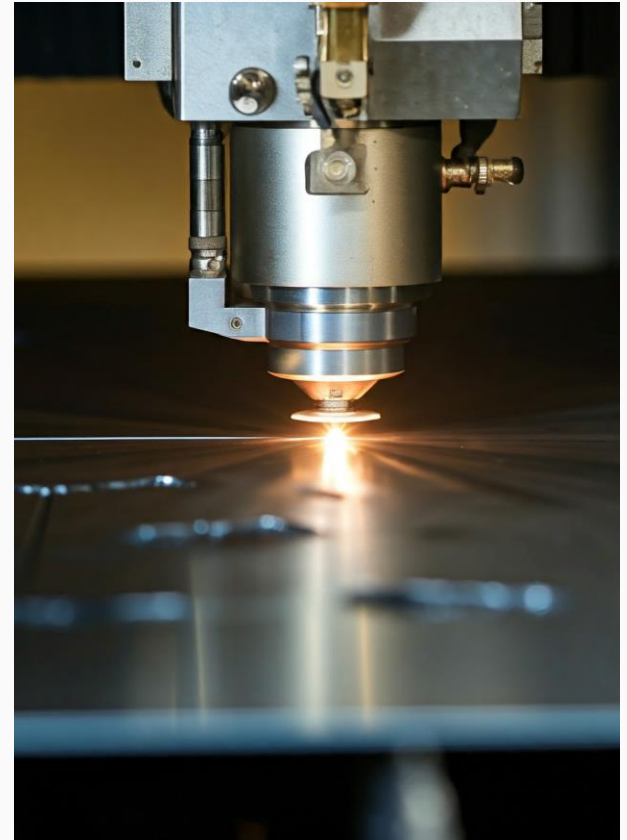
- U.S. National Science Foundation (2022)
  - 3.3 million science & engineering articles
- Information aggregation business models
  - Google - indexing the world's knowledge
  - Blinklist - audio summaries of books
  - Ground News - news aggregation service
- Learning on demand translated into isolated pieces of information that can generate structural problems
- Solution: curated content aligned with objectives





# The Right Content Type

- Knowledge is valuable when it can be converted into ability
- Learning material should be strongly correlated to current industry practices and needs
- Learning programs should offer learners real-life or close-to-real-life contexts for making use of knowledge



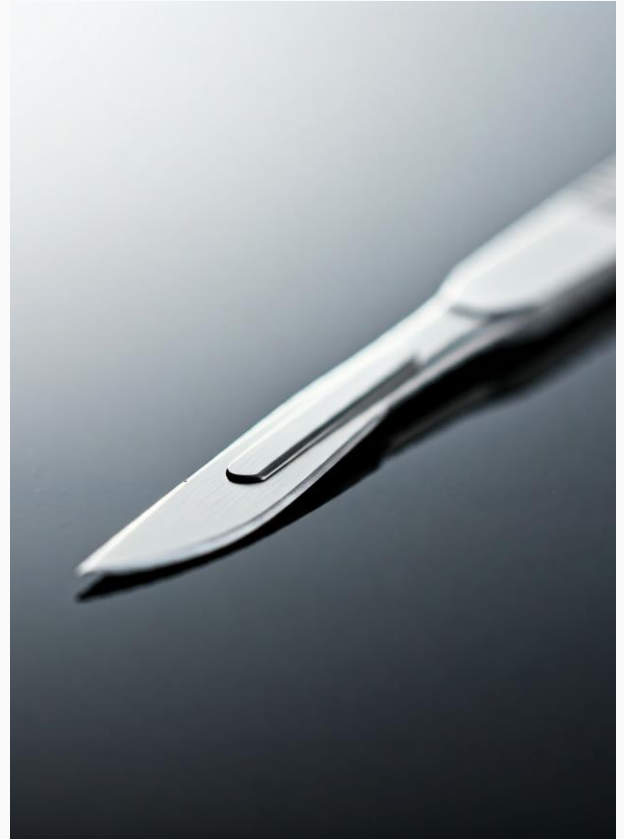
# The Right Mentor

- People have **different learning needs & paces**
- “Achievement may be rooted in teacher expectations” (2020)
  - challenge is balancing the need to cater to different learning paces while closing the achievement gap of students
- A **good mentor** will look for ways to **enhance** the learner's **ability to accumulate knowledge and develop ideas**



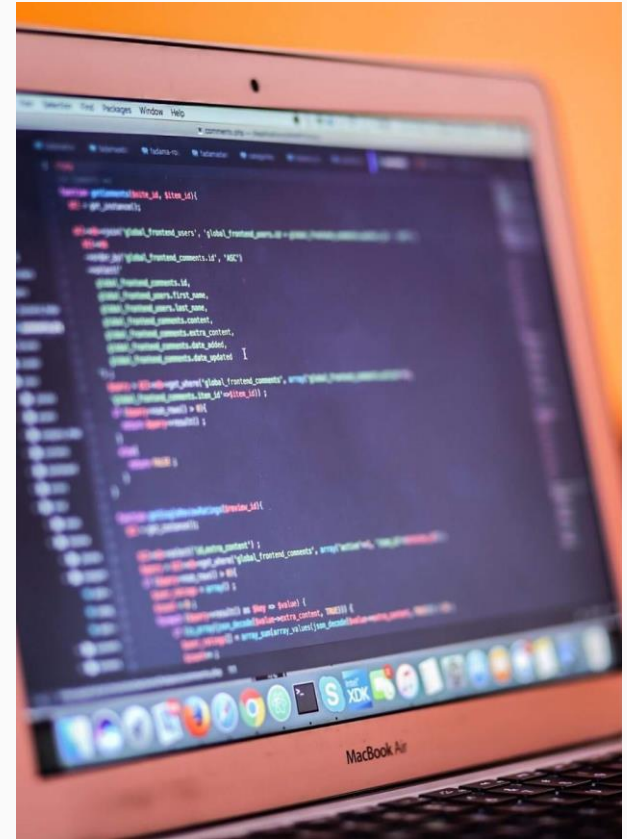
# Other Benefits of Lifelong Learning

- “Lifelong learning; why do we need it?” (2021)
  - Provides individuals with the knowledge, skills & values required to have an **active professional life**
  - Increases career opportunities and individual **economic stability**
  - Makes **communities more productive** and innovative, as workers create and discover new abilities and ideas
  - **Sharpens the mind**
  - Boosts **confidence**
  - Increases individuals opportunity to **socialize**



# Școala informală de IT

- Recognizes the **importance of lifelong learning** for **individuals** but also **companies** and the broader **economy**
- Developing **accredited learning programs** that address the needs of both employees and employers
- **Expert-led courses** are structured to accommodate learners of **all backgrounds** from **foundational IT** knowledge to specialized fields such as **project management, leadership, and AI**



# Școala informală de IT

**Start Now !**

[info@scoalainformala.ro](mailto:info@scoalainformala.ro)

[cluj@scoalainformala.ro](mailto:cluj@scoalainformala.ro)

[courses@scoalainformala.ro](mailto:courses@scoalainformala.ro)

[+40 374 494 848](tel:+40374494848)



# Data sources

- Lifelong learning processes in professional development for online teachers during the Covid era - Iris Reyhav , Nitzan Elyakim and Roger McHaney (2023)
- Future of Jobs Report - World Economic Forum (2023)
- World Intellectual Property Indicators 2023 Report
- <https://www.weforum.org/impact/reskilling-revolution-reaching-600-million-people-by-2030>
- <https://nces.nsf.gov/pubs/nsb202333/publication-output-by-region-country-or-economy-and-by-scientific-field>
- Developments in the knowledge-based economy research field: a bibliometric literature review - Gloria Aparicio, Txomin Iturralde, Ana Vilma Rodríguez (2021)
- Upskilling for Shared Prosperity - World Economic Forum (2021)
- Developments in the knowledge-based economy research field: a bibliometric literature review - Gloria Aparicio, Txomin Iturralde, Ana Vilma Rodríguez (2021)
- The Influence of Information Communication Technology Development on Income Inequality - Nawab Khan, Sohaib Ismail, Rizwan Kazim (2020)
- <https://insights.greyb.com>
- <https://wordrated.com/number-of-academic-papers-published-per-year>



# Data sources

- LIFELONG LEARNING: CONCLUSIONS FROM A LITERATURE REVIEW - Aylin Kaplan (2016)
- Lifelong learning; why do we need it? - Marjan Laal, Peyman Salamati - Social and Behavioral Sciences 31 (2012)
- Integrated Approach to Entrepreneurship – Knowledge based Economy: A Conceptual Model - S.Habib Mortazavi, Mahdi Bahrami (2012)
- Deliberate Practice and Acquisition of Expert Performance: A General Overview - K. Anders Ericsson (2008)
- A knowledge based economy, the socio-economic impact and the effects on regional growth - George M. KORRES, Stélios PATSIKAS, George POLICHRONOPOULOS (2002)
- Lifelong Learning - More Than Training - Gerhard Fischer, Piet Kommers (1999)

