



ETH Zurich + University of St.Gallen

Cognitive Technologies

Alexander Ilic, Menna El-Assady



Introduction: Alexander Ilic

- ❖ **Executive Director, ETH AI Center and Co-Director Swiss National AI Institute**
- ❖ **Researcher:** Graduated in CS from TUM; visiting researcher MIT; PhD from ETH; Assistant Professor & Privatdozent HSG
- ❖ **Tech Entrepreneur:** Founder Dacuda (acquired by Magic Leap 2017); former head Magic Leap Switzerland; 2x Entrepreneur of the Year (EY & HSG), Swiss Economic Award, etc.
- ❖ **Investor / business angel:** VAY (acq. by Nautilus '21); strong.network (acq. by Citrix '24); synthara.ai (edge AI); augmodo; ...
- ❖ **Entrepreneurship Ecosystem:** S2S Ventures (student-run VC) & Talent Kick (team forming)
- ❖ **Advisory:** Technology Advisory Board Maerki Baumann, Vice Chair SNKE



Introduction: Menna El-Assady

- ❖ Assistant Professor, ETH
- ❖ Interactive Visualization and Intelligence Augmentation Lab (<https://ivia.ch/>)
- ❖ **Researcher:** PhD from Data Analysis and Visualization at the University of Konstanz (Germany)
and in the Visualization for Information Analysis Lab at the OntarioTech University (Canada)
- ❖ Research Focus:
 - ❖ Hybrid Human-AI Intelligence
 - ❖ Visual Analytics
 - ❖ Interactive & Explainable AI
 - ❖ Co-Adaptive Process Modeling
- ❖ **Developing:** <https://lingvis.io> <https://explainer.ai> <https://visual-musicology.com>
- ❖ More Information: <https://el-assady.com>





ETH AI CENTER

Amplifying the human potential through **interdisciplinary** **AI research** and paving the way from **science to society**

ETH's central hub for AI – cross-departmental competence center

- Co-evolve AI foundations & impact areas
- Flagship fellowship programs (PhD & Post-Doc)
- Co-locate all disciplines at dedicated physical center (~980sqm)
- From research to industry & start-ups
- International collaboration through European AI Network ELLIS

139 Professors
200+ Post-Docs
1400+ PhD Students

Embedded in the most dense AI ecosystem of the world

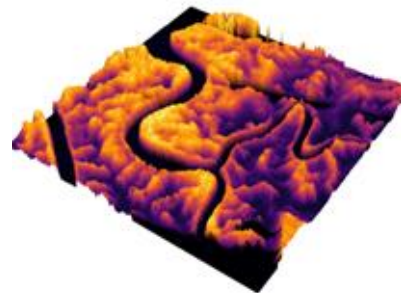
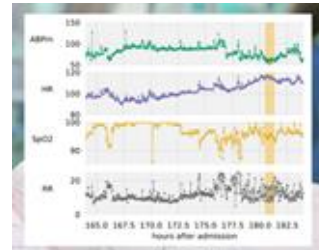
Strong position internationally
in research, but fragmented

ETH Zurich ranks first in the world for 3 subjects, according to QS

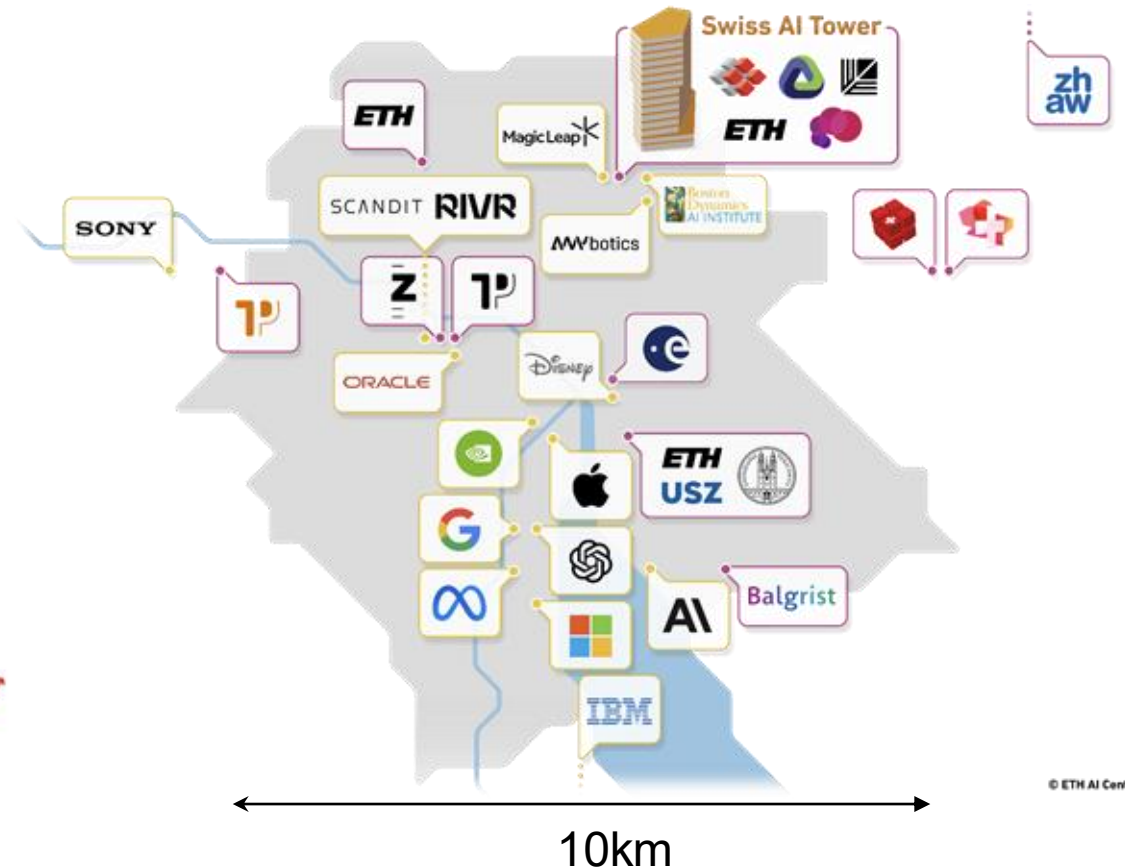
QS (Quacquarelli Symonds) unveiled its 2024 World University Rankings by Subject. ETH Zurich landed with 3 subjects in the top spot. A further 14 placed within the top ten in the world.

10.04.2024 by Marianne Lucien

• Read • □ • < Share



and immersed in a global tech hub
with the highest density of AI researchers

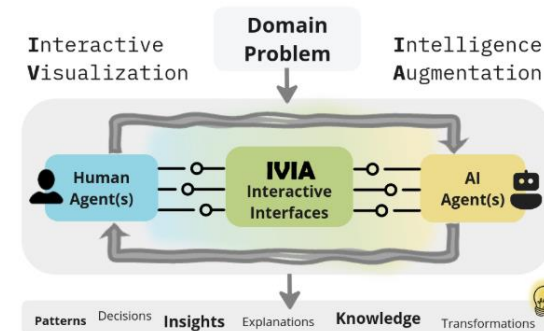


ETH AI Center



Interactive Visualization & Intelligence Augmentation Lab

Bridging Human and Artificial Intelligence



Our IVIA research lab is part of the Visual Computing Institute at the Department of Computer Science of ETH Zurich. As a group, we are also affiliated with the SWISS AI Initiative, Swiss ACM SIGCHI (SwissCHI), ETH for Development | ETH4D, UN-ETH Partnership, and Human-Computer Interaction at ETH Zurich.

Background survey

Go to www.menti.com and use the code 3637 1506



Module Outline

What to expect today?

- ❖ Welcome and Introduction
- ❖ Background on Artificial Intelligence
- ❖ AI in Practice — Choosing the Right Tool
- ❖ Agentic AI — From Prompts to Autonomous Workflows
- ❖ Challenges, Risks, and Pitfalls for building AI-based Products and Services
- ❖ Bias, Explainability & Human-AI Collaboration
- ❖ Wrap-up & Reflection

Schedule for remaining days

What to expect during the rest of the module?

- ✦ *Day 2: Group work (async)*
- ✦ *Day 3: Group presentations (online)*
- ✦ *Day 4: Advanced AI Applications (async)*
- ✦ *Day 5: Responsible AI and Leveraging the AI Ecosystem (online)*

Coursework and grading

- ✚ Group Assignment (50%): Project group work & presentation (day 3 – Sept 25, 2026)
- ✚ Individual Assignment (50%): Multiple choice quiz (after day 5)

Module Outline

What to expect today?

- ❖ Welcome and Introduction 
- ❖ **Background on Artificial Intelligence**
- ❖ Crash-course on Machine Learning & Deep Learning
- ❖ Challenges, Risks, and Pitfalls for building AI-based Products and Services
- ❖ Economic Considerations
- ❖ Introduction and Group Work

Background on AI & Crash Course

<https://embax26.workshops.ivia.ch/>