Jožef Stefan Institute
Ljubljana, Slovenia

United Nations Educational, Scientific and Cultural Organization

International Research Centre on Artificial Intelligence under the auspices of UNESCO

AI in Tourism

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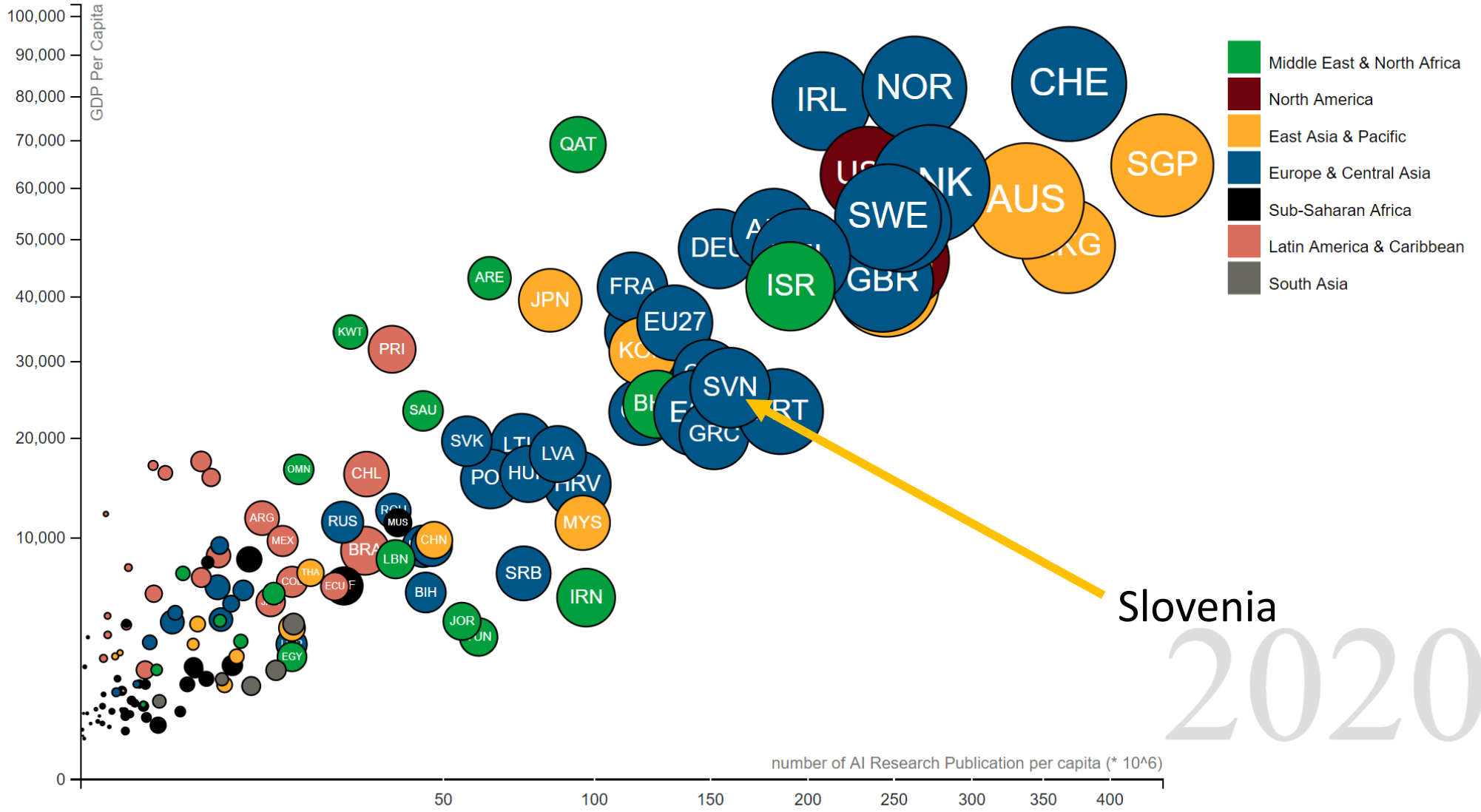
Slovenia on global AI landscape

OECD AI Policy Observatory (https://oecd.ai/)



Note: the number of total publications in a country per year is given by the size of its bubble. The 'cumulative' option displays aggregate results since 1980. Please see methodological note for more information.

Slovenia's Artificial Intelligence and Data Science Landscape v0.5

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PREPARED BY: BORIS CERGOL (BORIS.CERGOL@COMTRADE.COM, WWW.LINKEDIN.COM/IN/BORISCERGOL) // **MAY 2020** // **LICENSED UNDER CC BY-ND 4.0**

About UNESCO IRCAI

United Nations
Educational, Scientific and
Cultural Organization

International Research Centre
on Artificial Intelligence
under the auspices of UNESCO

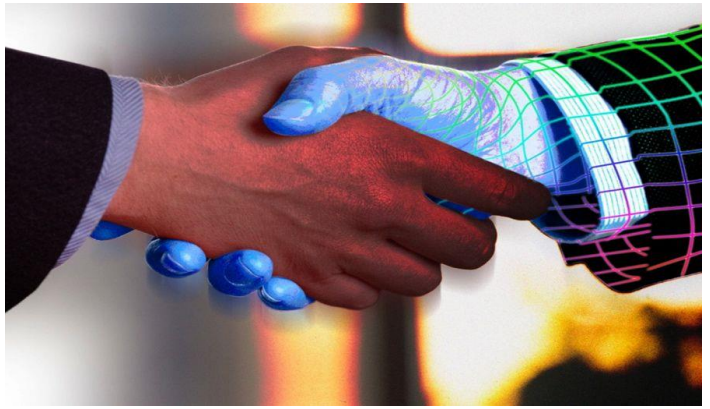
- The International Research Centre in Artificial Intelligence (IRCAI) was founded as the UNESCO AI arm in 2020 at the 40th session of the General Conference, where 193 UNESCO Member States approved the establishment of the Center.

- It was inspired by the international work in the field of AI by a set of high level institutions and researchers involved in industry and policy actions working directly with UNESCO and set up to showcase the use of Artificial Intelligence (AI) for the benefit of humanity.

IRCAI Strategic objectives

Objective 1: Research	1. Open AI solutions 2. Facilitate AI adoption 3. AI scenario planning 4. Cross-disciplinary reflection on AI 5. Repository of datasets
Objective 2: Policy innovation	1. Development of indicators 2. Policy support 3. Multi-stakeholder engagement 4. AI Observatory 5. Civic society outreach
Objective 3: AI talent development	1. Training 2. Networks
Objective 4: Impact and outreach	1. Advocacy 2. Engagement

Artificial Intelligence & Tourism



- How to understand what is AI?
  - …it is a set of tools on how to deal with complexity
  - …augmenting human intelligence and beyond
  - …including information retrieval, structuring knowledge, decision making

- Where AI can appear in tourism industry?
  - …at any point where we need nontrivial decision making
  - This includes travel, hospitality, logistics, recommendations, management

Some innovative AI application in tourism

- Smart digital assistants
  - …in hotel rooms, in cars, outdoors
  - …could be audio/text conversation, augmented reality
  - …cultural heritage, daily information, navigation
- Digital Twins
  - …to organize logistics of tourism organizations (companies, associations)
  - …to optimize travel, business, logistics
- Environmental monitoring
  - …environment gets overloaded in the peaks
  - …management of water, air, traffic, wild life, security, safety

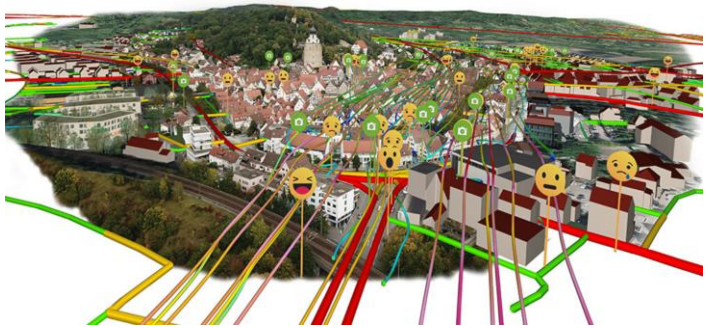
Smart digital assistants

- Imagine e.g. Amazon Alexa in every hotel room where a guest can talk openly about
  - …the place where the person appears
  - …the history and cultural heritage
  - …local and global news
  - …opportunities
- Imagine physical environment being augmented and observable through mobile phone
  - …each spot, object could be seen and explained in a simple way to the visitor

Tourism Digital Twins to manage logistics

- Digital Twins are a type of systems which capture digital copy of physical reality
  - …e.g., real-time understanding all the processes in hotel, transport, logistics
  - The solutions applied in manufacturing to optimize factories
  - …the technology is being transferred into tourism business processes

- Imagine local or nation wide control center which has complete real-time picture of what is happening in tourism domain at that moment
  - …digital twins can predict how things will evolve
  - …digital twins can detect anomalies to allow appropriate reactions
  - …digital twins can simulate development of physical life
  - …digital twins can optimize existing business processes



Summary

- Artificial Intelligence is a set of technologies which can help us in everyday life

- The domain of tourism is full of ‘complexities’ which can be managed by the modern technology
  - …not to harm anybody
  - …but to make the experience for visitors smoother
  - …and to optimize the organization of the tourism organizations