MapAI 2023

ICC 2023 Pre-Conference Workshop on Cartography and AI

82 Ryneveld St, Stellenbosch ([Map Link](#))
Narga D Computer Lab, Chamber of Mines Building (Geology), Stellenbosch University

9:00 - 9:20   Welcome, introductions, and overview of the workshop

9:20 - 10:30   Lightning Talks

AI-Assisted Cartography

What is a map? Questions about what makes a map a map and the potential for the layers in CartoAI
Carolyn Fish, University of Oregon

The Use of AI in Atlas Projects
Zhaoxu Sui, University of Oregon

Diffusion in Cartography – Opportunities and Challenges
Raimund Schnürer, Sidi Wu and Lorenz Hurni, ETH Zürich

Enhancing and Upscaling Historic Analog Aerial Images using AI Image Models
Miloš Basarić

Deep learning empowering global geospatial data production: Examples from industry
Leigh Lotter, LuxCarta & Stellenbosch University

Adapting and Personalizing Maps with AI

Artificial Intelligence and Cognitive Cartography: From Sequence Visualization to Interpretation
Standa Popelka, Palacky University Olomouc

Using Eye Tracking and AI to Personalize Map Reading: The importance of open benchmark datasets
Merve Keskin, NLS Finland

Transforming context inference techniques for mobile maps with generative AI
Mona Bartling, University of Zürich

AI for personalising maps and its dangers
Tumasch Reichenbacher, University of Zürich

Group Q&A – 25 Minutes from 10:05 – 10:30

10:30 - 11:00   Coffee break

11:00 - 12:00   Lightning Talks

Trust, Ethical Considerations, and Social Implications for Cartography & AI

The Ethics of AI-Generated Maps: A Study of DALL·E 2 and Implications for Cartography
Yuhao Kang, Qianheng Zhang and Robert Roth, University of Wisconsin Madison

The Intersection of AI, Trust, and Cartography
Tim Prestby, Penn State University

The importance of trust in maps
Marketa Beitlova, Palacy University Olomouc

Potential Implications of Artificial Intelligence Generated Maps in the Dissemination of Misinformation
Noah Mead & Amy Griffin, RMIT University

Deepfake Maps and Satellite Images: Implications and Opportunities
Aileen Buckley, Esri

The Challenges of Using AI to Promote Further Learning in Cartographic Education
Lily Houtman, Penn State University

Creativity, Labor, & Cartography in the Age of AI
Jack Swab, University of Kentucky

Explainable AI - A Cartographic Imperative
André Skupin, San Diego State University

Group Q&A – 20 Minutes from 11:40 – 12:00

12:00 - 13:30	Lunch break
13:30 - 14:30	Collaborative Task #1

- Comparing prompt generation w/ different platforms
- Generate thematic maps based on statistical data using AI
- Design a cartographic experiment methodology using an LLM

14:30 - 14:45	Coffee break
14:45 - 16:00	Collaborative Task #2

- MapAI research question development

16:00 - 16:30	Wrap-up discussion, next steps
18:00 - 21:00	Dinner (optional, details TBA)

This Workshop is presented by the ICA Commission on Visual Analytics (https://viz.icaci.org/) and the ICA Commission on Cognitive Issues in Geographic Information Visualization (https://cogvis.icaci.org/)

Anthony C. Robinson (arobinson@psu.edu), Penn State University, United States
Arzu Çöltekin (arzu.coltekin@fhnw.ch), FHNW, Switzerland
Amy Griffin (amy.griffin@rmit.edu.au), RMIT University, Australia