

Data Analytics in ANP with Python: Unveiling Insights through the Supermatrix

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Subtitle: Mastering the Supermatrix and Sensitivity Analysis with AhpAnpLib for Strategic Decision-Making

In this 45-minute hands-on workshop, participants will explore data analytics within the ANP framework using the AhpAnpLib Python library. Focusing on the supermatrix as a core tool for understanding interdependencies between criteria, we will walk through a real-world market share model. You'll learn how to calculate and interpret the supermatrix, use sensitivity analysis to test decision robustness and extract strategic insights that can be applied in consulting and AI-enhanced decision-making. This workshop is ideal for professionals seeking to deepen their data-driven decision-making skills using Python and ANP.

Participants will leave with the ability to:

- Set up and analyze an ANP market share model using AhpAnpLib.
- Conduct sensitivity analysis to explore how changes in criteria weights affect outcomes.
- Leverage AI-driven data analytics to enhance the interpretation of ANP results.
- Apply insights gained from ANP models to real-world consulting scenarios.

Requirements:

- Software: Google Colab (no installation required).
- Prior Knowledge: Familiarity with ANP models. No Python experience is required.

SHORT BIO



Dr Elena Rokou is the Chief Research Officer at Creative Decisions Foundation, the AHP/ANP research institute funded by Dr Thomas Saaty. She holds a PhD degree in the field of operational research, focusing on project scheduling and evolutionary algorithms from the National Technical University of Athens, Mechanical Engineering School, Sector of Industrial Management and Operational Research, a MSc in Management Engineering and a Software Engineering Diploma. Her main research interests cover project scheduling, optimization, evolutionary algorithms, MCDA and decision support tools.

Since 2020, Dr. Rokou has served as an Adjunct Professor at the University of Pittsburgh's Katz Graduate School of Business. In 2024, she was honored with both the Full-Time Masters Student Choice Award for Outstanding Teacher and the Executive MBA Student Choice Award for Outstanding Faculty of the Year from the Katz Graduate School of Business. Additionally, she is a Fellow of the International Center for Conflict Resolution (IC4CR), where she continues to contribute her expertise to the fields of decision-making and conflict resolution

Specialties: project scheduling, optimization algorithms, ANP and group decision making