Resource Modeling Solutions / A GeologicAI Division

Python Fundamentals and Estimation with RMSP

Workshop Overview

Resource Modeling Solutions (RMS) will be running a five day in-person workshop focused on practical Python scripting and estimation with the Resource Modeling Solutions Platform (RMSP). Five full days of lectures, software demonstrations and hands-on sessions are planned. These will be presented by senior staff and optional pre and post course materials will be made available. The workshop will be offered at the following locations:

Location	Date	Language
Perth, Australia	March 24-28	English
Denver, USA	TBD	English
Brisbane, Australia	TBD	English
Belo Horizonte, Brazil	Tentative	Portuguese

Each day includes lectures, software demonstrations, and hands-on work from 9:00 AM to 5:00 PM local time. A summary of the daily topics is provided below, with a *detailed syllabus at the end of this document*.

Day 1	Introduction to Python, Jupyter Notebooks, and Essential Data Science Packages
Day 2	Data Visualization in Python and Introduction to RMSP
Day 3	Resource Modeling Workflow Setup and EDA
Day 4	Variogram Calculation and Modeling
Day 5	Estimation and Validation

Pricing

The in-person workshop in Australia is priced at $4000 (AUD, including Australian tax) and includes:

- Temporary RMSP training licenses valid for one month before and after the course, ensuring participants can engage without affecting their organization's existing RMSP licenses
- Case studies using the RMSP software
- Catering throughout the course: morning tea, lunch, and afternoon tea.

Pricing for workshops in other locations will be announced once dates are confirmed.

The following discounts are cumulatively applied:

Early Registration (60 days before workshop commencement)	20%
RMSP Licensee	20%

Contact Resource Modeling Solutions at contact@resmodsol.com with any questions. Detailed course descriptions and course registration are available at https://resourcemodelingsolutions.com/training.

Terms

To cancel your registration, please email support@resmodsol.com. Resource Modeling Solutions Ltd reserves all rights regarding courses and may cancel registrations at our discretion. In the event of a canceled course, Resource Modeling Solutions Ltd will issue a 100% refund for course fees but is not responsible for any other fees incurred by registrants.

Workshop Syllabus and Details

Each day will be divided into a morning and afternoon session, combining lectures and software demonstrations with hands-on sessions. The software demonstrations would use RMS datasets relevant to each topic. In the hands-on sessions, attendees would have the option of experimenting with the provided datasets from the demonstrations, or extending methods to their own datasets and work. The latter approach would be recommended for attendees when feasible. The detailed syllabus and scheduled breaks are as follows, and the duration of each session may vary slightly to accommodate content:

Day 1 – Introduction to Python, Jupyter Notebooks, and Essential Data Science Packages

Start	End	Duration	Description
9:00	10:00	1 hour	Introduction to Python and Jupyter Notebooks; motivation for use in geoscience
10:15	11:00	45 min	Notebook usage introduction; Python variables and data types
11:00	12:00	1 hour	Hands-on session: installation support, Jupyter Notebook and Python basics
13:00	13:50	50 min	Iterative calculations (loops), conditional statements, and custom functions
14:00	15:00	1 hour	Introduction to essential Python packages (Pandas, Numpy and Matplotlib)
15:15	17:00	105 min	Hands-on session: load, explore and manipulate tabular data from imported csv

Day 2 – Data Visualization in Python and Introduction to RMSP

Start	End	Duration	Description
9:00	10:00	1 hour	Review of Day 1 and basic Python plotting with Matplotlib and RMSP
10:15	11:00	45 min	Advanced plotting with RMSP, customizing plots, plotting functions
11:00	12:00	1 hour	Hands-on session: plotting practice with Matplotlib and RMSP
13:00	13:50	50 min	RMSP resources: portal navigation, ChatRMS, documentation, available examples
14:00	15:00	1 hour	Load, clean, desurvey and composite drill data, 3D visualization
15:15	17:00	105 min	Hands-on session: load, process and visualize drill data

Day 3 – Resource Modeling Workflow Setup and EDA

Start	End	Duration	Description
9:00	10:00	1 hour	Review of Day 2 and block model import, definition and flagging
10:15	11:00	45 min	Resource modeling workflow setup (interim import/export, chained notebooks)
11:00	12:00	1 hour	Hands-on session: block models, wireframes, flagging
13:00	13:50	50 min	Resource modeling workflow setup continued (Variables, Domains)
14:00	15:00	1 hour	Exploratory Data Analysis, including statistics, boundaries, capping, bias analysis
15:15	17:00	105 min	Hands-on session: statistics, boundaries, capping, bias analysis

Day 4 – Variogram Calculation and Modeling

Start	End	Duration	Description
9:00	10:00	1 hour	Review of Day 3 and intro to experimental variograms and nugget effect modeling
10:15	11:00	45 min	Continued experimental variograms (directional variograms)
11:00	12:00	1 hour	Hands-on session: experimental variograms
13:00	13:50	50 min	Variogram modeling – manual and autofitting
14:00	15:00	1 hour	Direction selection from variogram volumes, radar maps, and spheres
15:15	17:00	105 min	Hands-on session: variogram modeling practice

Day 5 – Estimation and Validation

Start	End	Duration	Description
9:00	10:00	1 hour	Review of Day 4 and Ordinary Kriging overview
10:15	11:00	45 min	Parameterizing the search and the estimator
11:00	12:00	1 hour	Hands-on session: Ordinary Kriging practice
13:00	13:50	50 min	Model comparison and validation
14:00	15:00	1 hour	Supporting plots/analysis
15:15	17:00	105 min	Hands-on session: model comparison and validation practice

Lunch and breaks will be catered for all days of the workshop. Please inform us of any dietary requirements upon registration and we will do our best to accommodate. The final venue will be subject to attendance requirements but would be in reasonable proximity to downtown of each city the workshop is being offered at. Note that cancellation of workshop registration by the attendee will lead to the following refunds:

- Prior to 45 days before workshop commencement: 75%
- Between 45 and 30 days before workshop commencement: 50%
- Less than 30 days before workshop commencement: 50% credit for future courses

This refund schedule reflects financial commitments to venues and other logistical requirements.