

Survival Analysis & Cox Regression for Genomic Cohorts — Hands-on

Master survival analysis for genomic and clinical cohorts. Build robust time-to-event models with correct handling of censoring, proportional hazards diagnostics, modern regularization, competing risks, and deep learning approaches—complete with reproducible workflows and clear reporting for translational use.

Survival Analysis & Cox Regression for Genomic Cohorts

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Session 1 — Survival Foundations & KM/Log-Rank	Session 2 — Cox PH: Modeling & Diagnostics
Session 3 — Regularization, Competing Risks & ML	Session 4 — Mini Capstone: Risk Stratification
Report	

Session 1

Fee: Rs 13,800 [Apply Now](#)

Survival Foundations & KM/Log-Rank

Time-to-event basics & censoring types

[right/left/interval](#) [administrative vs informative](#) [event definitions](#)

Kaplan–Meier estimation & comparisons

[KM curves & CI](#) [log-rank/Wilcoxon](#) [stratification](#)

Data prep & pitfalls

time origin/zero time immortal time bias landmarking

Session 2

Fee: Rs 19,200 Apply Now

Cox PH: Modeling & Diagnostics

Partial likelihood & hazard ratios

baseline hazard ties (Efron/Breslow) offsets/strata

Diagnostics & assumptions

Schoenfeld residuals influential points non-linearity (splines)

Time-dependent covariates & AFT models

start-stop format AFT (Weibull/Log-logistic) restricted cubic splines

Session 3

Fee: Rs 24,800 Apply Now

Regularization, Competing Risks & ML

High-d survival & penalized models

L1/L2/elastic net Cox stability selection feature grouping

Competing risks & incidence

Fine-Gray model cumulative incidence cause-specific hazards

Tree & deep survival models

Random Survival Forests DeepSurv/DeepHit pycox/scikit-survival

Session 4

Fee: Rs 31,200 [Apply Now](#)

Mini Capstone: Risk Stratification Report

Build a survival model for a genomic cohort

Theory + Practical

Evaluation & clinical utility

C-index/Brier score **time-dependent AUC** **calibration plots/Net Benefit**

Deliverables: code, model card & PDF brief

notebook/script **risk strata tables** **PDF/HTML**