Dr. Mayank Kumar Jha

Data Scientist

IIT Madras, Chennai
600042
India
7856071898, 9155230398
✉ mayanksandeep@gmail.com

Education

08/2015–01/10/2021	**Ph.D (Statistics)**, *Indian Institute of Technology*, Patna. Statistical Inference for Reliability in a Multicomponent.
08/2013–07/2015	**M.Tech (Mathematics & Computing)**, *Indian Institute of Technology*, Patna, *CGPA - 9.27/10*. Improved Algorithm for Active Learning
06/2010–09/2012	**M.Sc. Mathematics**, *Patna*, University, *First div. (68%)*.

Work Experience

Since, Jan-2022	**Data Scientist**, *GEP*, Hyderabad, India.
Oct 2020, Dec-2021	**Associate Data Scientist**, *GEP*, Hyderabad, India.
Aug 2020, Oct-2020	**Consultant**, *Zinnov Management Consulting Private Ltd*, Bangalore, India.

Technical Skills

Applications	Latex, MS office, Excel
Programming Languages	R, Python, PySpark in Azure, elastic search, SQL, MATLAB
Plateforms	Windows, Linux
Packages and Softwares	Mathematica, Math Type

Selected Publications

○ Petropoulos, C., Tripathi, Y. M., & **Jha, M.k.**(2022). Estimation of $P(Y < lnX)$ for lognormal distribution. Quality Technology Quantitative Management (accepted).

○ Singh, D.P., **Jha, M. K.**, Tripathi, Y. M. & Wang, L., (2022). Reliability estimation in a multicomponent stress-strength model for unit Burr III distribution under progressive censoring. Quality Technology Quantitative Management, DOI: 10.1080/16843703.2022.2049508.

○ **Jha, M. K.**, Dey, S., Alotaibi, R., Alomani, G., & Tripathi, Y. M. (2021). Multicomponent Stress-Strength Reliability estimation based on Unit Generalized Exponential Distribution. Ain Shams Engineering Journal, Vol. 13(5), 101627.

○ **Jha, M. K.**, Tripathi, Y. M., & Dey, S. (2021). Multicomponent stress-strength reliability estimation based on unit generalized Rayleigh distribution. International Journal of Quality & Reliability Management, Vol. 38(10), 2048-2079.

○ **Jha, M. K.**, Dey, S., Alotaibi, R. M., & Tripathi, Y. M. (2020). Reliability estimation of a multicomponent stress-strength model for unit Gompertz distribution under progressive Type II censoring. Quality and Reliability Engineering International, 36(3), 965-987.

○ **Jha, M. K.**, Dey, S., & Tripathi, Y. M. (2019). Reliability estimation in a multicomponent stress–strength based on unit-Gompertz distribution. International Journal of Quality & Reliability Management.

○ Tripathi, Y. M., Petropoulos, C., & **Jha, M.k.** (2018). Estimation of the shape parameter of a Pareto distribution. Communications in Statistics-Theory and Methods, 47(18), 4459-4468.

Projects

○ Role and Responsibilities in projects:
  - Requirement gathering
  - Implementation
  - Deployment to different environments
1. Supplier recommendation (**Since-Nov-2020**)
  - Algorithms
    · DBSCAN
    · Levenshtein score
    · jaccard similarity w.r.t word and character
2. Parametric Cost Model (**Since-Nov-2020**)
  - Algorithms
    · TFIDF
    · K-means cluster

- · Random forest
- · Gradient Boosting
3. Guided Buy (**Since-March-2021**)
    - Algorithms
      - · Elastic search, Libshort SVM
      - · Levenshtein score
      - · Jaccard similarity with respect to word and characters

PhD Research Work

Title	*Analysis of Life Time Distributions under Multicomponent Stress-Strength Parameters*
Supervisor	Dr. Yogesh Mani Tripathi
Description	During my Ph.D., I have considered making statistical inferences for unknown quantities of multicomponent stress-strength models set up for a different lifetime distribution with support on a bounded interval. A finite number of test units is put into operation in a life testing experiment, and under some given operating conditions, failure times of units are recorded. Sampling schemes include:

  ○ Complete sampling.
  ○ Type-I censoring (test continues until a prefixed time point is reached).
  ○ Type-II censoring (trial continues till a prefixed number of failure times recorded).

also, I have derived different inferential results from setting up the following lifetime distributions:

1. Generalized Rayleigh Distribution

2. Inverse exponentiated distributions

3. Gompertz Distribution under Progressive Type-II Censoring

4. Generalized-Rayleigh distributions

5. Extensive discussions are made under various sampling schemes, such as progressive type-II censoring, progressive interval censoring, and generalized progressive hybrid censoring, and such censored data frequently appeared in applications

6. Statistical methods employed include frequentist and Bayesian approaches for point estimators of multicomponent stress-strength reliability, bootstraps, and Monte Carlo simulations for comparing various point and interval estimators. Moreover, some actual data illustrations are presented

Applications of my Ph.D. work	In reliability modeling and statistical inference, in industries such as reliability and life testing experiments.

Links

Google Scholar	https://scholar.google.com/citations?user=chNToPkAAAAJ&hl=en
LinkedIn	https://www.linkedin.com/in/mayank-kumar-jha-b34a8a79/

Awards & Achievements

○ GATE Examination 2013 with all India Rank – 334 .
○ **Ph.D. Representative** and a member of **Core Committee**, Students' &   Gymkhana, IIT Patna, 2018-19.
○ **Hall Secretary** of Boys Hostel, D-Block IIT Patna, 2017-18.
○ **Inter IIT Cricket**, 2016
○ Nominated as **reviewer** for the "Journal of Applied Statistics."
○ Nominated as **reviewer** for the "Reliability Engineering and System Safety."
○ Nominated as **reviewer** for the "Communications of Statistics ? Theory and Methods."