

# Akash Choudhuri

Portfolio: [soothysay.github.io](https://soothysay.github.io)

Github: [github.com/Soothysay](https://github.com/Soothysay)

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## EDUCATION

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- The University of Iowa** Iowa City, USA
  - Doctoral Degree - Computer Science; GPA: 3.5/4.0* *January 2022 - Present*
  - Courses: Algorithms, Programming Language Foundations, Data Mining, Cloud Computing.*
- Institute of Mathematics and Applications** Bhubaneswar, India
  - Master of Science - Mathematics with Data Science; GPA: 8.7/10* *July 2019 - July 2021*
  - Courses: Computational Statistics, Machine Learning, Time Series Analysis, Optimization Methods, Computer Vision, Natural Language Processing.*
- Birla Institute of Technology** Mesra, India
  - Bachelor of Science - Mathematics and Computing; GPA: 8.0/10* *July 2016 - June 2019*
  - Courses: Discrete Mathematics, Numerical Analysis, Data Structures and Algorithms, Design and Analysis of Algorithms, Probability and Statistics.*

## TECHNICAL SKILLS SUMMARY

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- Languages:** Python, JAVA, C, R, SQL, MATLAB
- Frameworks:** Scikit, Pytorch, TensorFlow, Keras, Flask, H3, Pyspark
- Tools:** GIT, PostgreSQL, MySQL

## PROJECTS

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- Heterogeneous temporal GCN for predicting HAI:** (Work in progress) Creation of a Dynamic Temporal Heterogenous GCN to model and predict C diff. in patients using hospital interactions data.
- Optimized Vaccine Allocation model to Combat COVID 19:** (Work in progress) Using real time USA mobility data and submodularity to optimize vaccine allocation across counties in USA.
- Determining the effect of elections on Indian Stock Markets using Mutual Information Theory.:** Ascertained the effect of the Lok-Sabha elections in India on the derivatives market. Chose a few companies from Nifty-50 and tried to perform clustering using Mutual Information Theory. Results and observations were presented at the end of the Summer School on Mathematical Finance at Chennai Mathematical Institute, India. (June '19)

## PUBLICATIONS

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- A Hybrid Machine Learning Model for Estimation of Obesity Levels (in publication):** In Data Management, Analytics and Innovation: Proceedings of ICDMAI 2022, Springer Nature.

## EXPERIENCE

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- Data Sutram** Kolkata
  - Data Scientist (Full-time)* *July 2021 - December 2021*
    - Designing Optimized Algorithm for Delivery Management Systems:** Creation of a real time optimization algorithm to assign orders to delivery executives in last mile delivery services.
    - Estimating Dynamic Footfall:** Finding metrics to compute dynamic footfall of places in India using internet devices ping data.
    - Wrapper for improved geo-coding:** Created a wrapper method which uses Google APIs to accurately geo-code Indian addresses.
- Solytics Partners** Remote
  - Consultant (Data Science)* *May 2021 - July 2021*
    - Financial Model Testing:** Worked on validating a Credit Risk Model of World Bank and performed additional stress testing experiments.
- Solytics Partners** Remote
  - Intern (Data Science)* *March 2020 - April 2021*
    - Auto ML Model:** Worked on creating various pipelines for creating an Auto ML and Deep Learning platform for credit risk scoring.
    - Pyspark integration with Keras Models:** Worked on creating Pandas UDFs to customize Neural Networks on Spark.

## ACADEMIC SERVICE

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- Conference Reviewer of epiDAMIK 5.0: The 5th International workshop on Epidemiology meets Data Mining and Knowledge discovery @ KDD 2022.
- Journal Reviewer at Informatics in Medicine Unlocked (IMU).