Anjan Mandal

Contact Information

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Experience & Research Interest

6+ years of industry experience; Development of Statistical methodologies to address scientific questions involving Spatial, Directional, and Time Series data; Bayesian inference; Bayesian non-parametric modeling; Bayesian application on Neuroimaging data; Adaptive sequential probability ratio test on clinical data; Sampling on Simplex space; Regularized Regression; Big Data Analysis.

Education

Ph.D., Statistics, UNLV — Aug 2017 - Present
M.Sc., Statistics, IIT Kanpur, India — Aug 2008 - May 2011
B.Sc., Statistics, University of Calcutta, India — Aug 2005 - May 2008

Relevant Experience

Bayesian application in fiber direction estimation using in-vivo Neuroimaging signal — Aug 2019 - Present

We applied Bayesian methodology and MCMC technique to estimate the fiber Direction within corpus callosum using DT-MRI signals. We developed a methodology to resolve fiber crossing problem by collecting neighbourhood information, processing them for each voxel and using them as prior to have a coherent model.
Software used: R,FSL, Python

Academic Experience

Department of Mathematical Sciences, UNLV — Aug 2017 - Present
Teaching Assistant
Courses:
Stat 152 (Introduction to Statistics)
Math 120 (Fundamentals of College Mathematics)
Math 124 (College Algebra)
Math 132 (Finite Mathematics)
Responsibility: Solely responsible for classroom teaching, evaluation, and providing discussion session for the aforementioned courses.

Indian Statistical Institute, Calcutta — May 2009 - Jul 2009
Summer Intern
Bayesian and Interdisciplinary Research Institute (BIRU)
Responsibility: Tried to develop a rule for optimum adaptive sequential design to minimize the number of less effective drug and maximizing the probability of correct selection under the consideration of ASN.

Industry Experience

Accenture
Marketing Analytics Consultant — Dec 2014 - Jun 2017
Marketing Analytics Analyst — Nov 2012 - Nov 2014

Client domain: Off-price retail chain
Responsibility: Team lead for In-season and Preseason demand forecasting. Ad hoc analysis of Panel data. Modelling for new store and new product lines, periodical SLA analysis, detailed SKU and store level analysis for pre-season client meeting. Enhancement in existing process through automation.

Client domain: Telecommunication:

Responsibility: Team lead for weekly and seasonal promotional allocation modelling across mediums, product types, and phases through secure channel. Predictive analysis for new products and finding opportunities through halo and cannibalization effect analysis. Streamlining the post sales analysis and presenting to client in weekly meetings.

Client domain: Toys
Responsibility: Weekly and seasonal promotional allocation modeling across channels, stores, product types, themes, and phases.

Evalueserve May 2011 - Jul 2012
Research Associate, Fixed Income Group, Financial Services
Responsibility: Finding key variables to model Sovereign Credit Default Swap for Latin American countries.

PUBLICATIONS (ACCEPTED)

Coauthor in book chapter titled "Exploring Twitter Data to Understand the Impact of COVID-19 Pandemic in India using NLP and Deep Learning". The book "Intelligent Modelling, Prediction, and Diagnosis from Epidemiological Data" is due to be published by CRC press on November 23, 2021.

PUBLICATIONS (WORK IN PROGRESS)

"Bayesian Approach for Finding the Fiber Direction using Spatial Prior for Angular Continuity Estimation (SPACE)".
"Bayesian Approach for Resolving the Fiber Crossing using SPACE".
"Comparative Study of Bivariate Count Regression Models Using Approximate Bayesian Computation".

PRESENTATIONS

Bayesian Directional Parameter Estimation under Continuity, Joint Statistical Meetings, Virtual Conference. Aug 2020
Bayesian Directional Parameter Estimation under Continuity, State of Data Science, Las Vegas, Virtual Conference. Aug 2020

SKILLS

Softwares: R (Advanced), SAS (Advanced), SPSS (Beginner), RJAGS (Intermmediate), Python (Intermmediate), VBA Macro (Advanced).
Applications: LaTeX, Microsoft Office.
OS Environment: Windows.
Relevant courses: Experimental Design, Python for Data Science and Machine Learning, Bayesian Analysis, Regularized estimation process.

PROFESSIONAL SERVICES

Founder President of Data Science Innovated, UNLV Aug 2018 - May 2019
Registered student organization within UNLV; Organized bi-weekly lecture series on data science.
Objective: To facilitate campus-wide collaboration and to promote professional development by involving interested community members.
Reviewer: "Cyberpsychology, Behavior, and Social Networking".

AWARDS

Employee of the Financial Q3-2015, Accenture. 2015
CSIR Junior Research Fellowship, Govt of India. 2010

MEMBERSHIPS

American Statistical Association.
State of Data Science, Las Vegas.
Data Science Innovated, UNLV.