SHAFAYET SHARIAR HOSSAIN

PERSONAL INFORMATION

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EDUCATION

2020- Present University of South Florida

PhD Big Data Analytics

GPA: 3.82/4.00
Current Ongoing Research Project: Application of machine learning to evaluate acute COVID-19 illness datatypes to predict development of subsequent long-COVID interstitial lung disease. Healthcare Care Path Recommendation system implementing Reinforcement learning

2018-2020 Ball State University

M.Sc. Statistics

GPA: 3.94/4.00
Thesis: *Parametric and non-parametric classification methods with application to accelerometer data*
Description: This thesis used Bayesian proportional odds regression model as parametric and Generalized Unbiased Interaction Detection and Estimation (GUIDE) as non-parametric method to compare and contrast classification of raw accelerometer data.
Advisor: Prof. Munni Begum

2009-2014 Shahjalal University of Science & Technology

B.Sc. Statistics

GPA: 3.46/4.00 ·
Description: This degree primarily focused on extensive understanding on Mathematical Statistics, Applied Statistics, Computational Statistics & Bio-Statistics.

COMPUTER SKILLS

Advanced R, SAS, R Markdown,R Shiny, Python

Basic LaTeX, c, Minitab, SPSS

WORK EXPERIENCE

Jun-Aug 2019 Summer Intern, Indiana State Budget Agency

Indiana State Budget Agency, Tax-Rev Division

Developed forecasting methodologies of Finance & Insurance Tax and Sales Tax utilizing regression and Box-Jenkins time series models.
Presented tax revenue forecast using R & R shiny to the Revenue Forecast Technical Committee (RFTC) on Financial & Insurance Tax and Sales Tax
Reference: Hari Razafindramanana · +1 (317) 233 7635 · hrazafindramanana1@sba.in.gov

2019–2020 Teaching Assistant, Ball State University

Ball State University

Worked as a course instructor of MATH 125 which involves personal finance, probability, statistics & graph theory.
Set exam questions, graded papers, organized group presentations of students to create a complete learning experience.
Reference: Prof. Hanspeter Fischer +1 (765) 285 8680 · hfischer@bsu.edu

2018–2019 Graduate Assistant, Ball State University

Ball State University

Operated as a learning center tutor at the Ball State University Learning Center.

Helped students with homework and study skills on various courses. i.e. MATH 108,MATH 112,MATH 125,MATH 320, MATH 321
Reference: Prof. Hanspeter Fischer +1 (765) 285 8680 · hfischer@bsu.edu

PUBLICATION

Under Review Ordinal Statistical Models of Physical Activity Levels from Accelerometer Data

International Journal of Exercise Science

Improvements in accelerometer technology has led to new types of data on which more powerful predictive models can be built to assess physical activity. This paper explains and implements ordinal random forest with specified performance function and partial proportional odds models which both take into account the ordinality of responses given explanatory accelerometer data.
Authors: Shafayet S Hossain, Prof. Drew M Lazar, Prof. Munni Begum

PROJECT

March. 2019 Statistical Analysis and Tutoring for Lebanon Preschool Study

The project involved supporting the primary researcher (Katie M. Murphy-Early Childhood Technical Advisor(IRC)) in conducting statistical analysis a study exploring child development outcomes and preschool quality in Lebanon. The study included an analysis of approximately 600-700 children (IDELA scores) and measures of classroom quality for approximately 70 classrooms. Proposed analysis included psychometric analyses of factorial ANOVA and multi-level linear regression model.

Nov. 2018 Predicting the face amount of insurance policies applying supervised learning methods

The project involved finding a suitable supervised learning method to predict the face amount of various insurance policies. In terms of method linear regression, regression tree and SVR were considered to predict the face amount while cross-validation provided the basis for the selection of appropriate model.

OTHER INFORMATION

Awards

2019-2020 · Dr. Mir Masoom Ali Scholarship of Department of Mathematical Sciences, Ball State University

May 2, 2022