Jayani Lakshika

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GitHub: https://github.com/JayaniLakshika
Overleaf: https://www.overleaf.com/project
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EDUCATION

B.Sc. (Honours) in Statistics
January 2017 - December 2020

University of Sri Jayewardenepura (USJ), Sri Lanka
- Overall GPA: 3.79 out of 4.0 (First Class Honours)
- Batch rank: 02
- Statistics GPA: 3.80
- Computer Science GPA: 3.59, Mathematics: GPA 3.97 (in the first two years)
- Grade of the Research project under STA 483 6.0: A+
- Grade of Advance Designs and Analysis of Experiments STA 317 2.0: A+

Diploma in Computer System Design (DCSD)
March 2016 - March 2017

National Institute of Business Management (NIBM)
- Gold Medalist

Certificate in Business Accounting
December 2015 - September 2016

Chartered Institute of Management Accountants (CIMA)

G.C.E. Advanced Level
August 2015

Sujatha Vidyalaya, Matara
- Physical Science Stream including Mathematics, Physics, and Chemistry

G.C.E. Ordinary Level
December 2012

Sri Sumangala Balika Vidyalaya, Weligama
- Majors with Commerce, Information & Communication Technology, and English Literature as optional subjects

PUBLICATION & RESEARCH PROJECTS

Journal Submission (under review)
2021

1. Lakshika, J. P., & Talagala, T. S. (2021). Computer-aided Interpretable Features for Leaf Image Classification. arXiv preprint arXiv:2106.08077
2. Research paper on "Statistical Machine Learning for Medicinal Plant leaves Classification".

Publications
2021

1. Young Scientists' Conference on Multidisciplinary Research (YCMR) abstract publication (ISSN 2815-0260).
2. 17th applied science abstract publication (Page 74).

Conference Proceedings

1. 17th Applied Statistics Conference, Solvenia
September 2021

   - Research poster and abstract publication, presentation with named Statistical machine learning for medicinal plant leaves classification.

2. Young Scientists' Conference on Multidisciplinary Research (YSCMR 2021) which is organised by the Young Scientists' Association of the National Institute of Fundamental Studies, Sri Lanka (NIFS-YSA)
October 2021

- Speed-talk presentation on Statistical machine learning for medicinal plant leaves classification.

Talks
1. Estadistica 2021 – the Annual Statistics Day organized by the Statistics Society of University of Sri Jayewardenepura, Sri Lanka August 2021

   - Being a speaker who talked about the undergraduate research project (Computer Vision System for Automated Medicinal Plant Identification) .

2. Vx Tech Talk 2021, Vizuamatix Pvt. Ltd, Sri lanka August 2021

   - Tech-talk presentation on Computer Vision System for Automated Medicinal Plant Identification.

Currently Working
1. Research paper on "A Review of Leaf Image Classification".

Research
1. **Computer Vision System For Automated Medicinal Plant Identification** 2021
   Medicinal plants are usually identified by practitioners based on years of experience through sensory or olfactory senses. The other method of recognizing these plants involves laboratory-based testing, which requires trained skills, data interpretation which is costly and time-intensive. Automatic ways to identify medicinal plants are useful especially those that are lacking experience in herbal recognition. There is no standard mechanism in identification of medicinal plants. Therefore, we introduce an automatic approach based on statistical machine learning to identify medicinal plants. We refer to our medicinal plant classification algorithm as MEDIPI : **MEDI**icinal **P**lant **I**dentification. Our classification algorithm operates on the features extracted from the image leaves.

Projects
1. **Financial Risk Management System (FRMS)** Present
   This project contain with four major parts which is used to identify and manage the customers in financial sector. They are NPA (Non-performing Assets), EWS (Early Warning System), and Credit Worthiness.
2. **Automatic report generation in a telecommunication** 2021
   The process starting from an issue a reload to use a reload including reports regarding to their current stage, storage and activation.There were daily and monthly reports which were developed using python and reports were shown as excels. The process starting from an issue a reload to use a reload including reports regarding to their current stage, storage and activation. There were daily and monthly reports which were developed using python and reports were shown as excels.
3. **NPA (Non-Performing Assets)** 2020
   A nonperforming assets (NPA) refers to a classification for loans or advances that are in default or in arrears. In our project we restricted to the loans and overdraft and cash credit (OD/CC) accounts left out-of-order for more than 90 days.
4. **Churn prediction of telecommunication company** 2020
   Customer churns are those targeted customers who have decided to leave a service provider, product, or even a company and shift to a competitor in the market. Shifting from one service provider to the next competitor in the market is a key challenge in highly competitive markets. Customer churns are those targeted customers who have decided to leave a service provider, product, or even a company and shift to a competitor in the market.

PACKAGE	*Co-author*	April 2021

R package, MedLEA

- **MedLEA**: **Med**icinal **LEA**f is an open-source R software which contains information about medicinal plants in Sri Lanka. This repository is available at `https://CRAN.R-project.org/package=MedLEA` for research reproducibility. The **MedLEA** package provides 18 morphological and structural features of 471 medicinal plant leaves. Also the package contains local name (Sinhala name), family name, and scientific name as well. In addition to that, there is a repository of 1099 leaf image of 31 medicinal plant species in Sri Lanka.

EXPERIENCE *Teaching Assistant (Temporary Instructor)* July 2021 to the present

Department of Statistics, USJ

- Conducting tutorial sessions (STA 326 2.0 R Programming, STA 215 2.0 Probability and Distribution Theory I, STA 114 2.0 Sampling techniques)
- Preparing, evaluating, and discussing assignments
- Coordinating/ invigilating online examinations
- Providing statistical consultancy
- Maintaining material/ records for quality assurance of the department

Associate Data Analyst January - November 2021

Vizuamatix (Pvt) Ltd.

Trainee Data Analyst July-December 2020

Vizuamatix (Pvt) Ltd.

Research Internship January-June 2020

Vizuamatix (Pvt) Ltd.

- Industrial training as a fulfillment of the degree B.Sc. (Honours) in Statistics

AWARDS *Selected as a 9 finalists: OCTAVE competition* 2021

Research abstract competition organized by OCTAVE company

Winning Team: Stat Circle 2018

Team member of the winners at inter university quiz competition organized by the Stat Circle Faculty of Science, University of Colombo, Sri Lanka

SKILLS *Programming Languages & Software*

MS Office, **R**, LaTeX, **Python**, Minitab, SPSS, Maple Classics, SQL Server, PostgreSQL, Java, C, **C++**, **PySpark**, Microsoft Power BI (intermediate), Tableau Public (intermediate), JASP (intermediate)

CONTRIBUTION TO THE UNIVERSITY *Statistical Consultancy Service, USJ* 2020

Provided statistical consultancy to internal and external students of other disciplines besides Statistics as well as non- statisticians in the industry.

- Contributor of DSjobtracker
- Documentation of dashboard
- Dashboard panel
- Models for sorption Isotherms

EXTRA-CURRICULAR ACTIVITIES

- Vice Secretary of Statistics society, Faculty of Applied Sciences, USJ, Sri Lanka (2019)
- Choreographer of the low country dance item and member of choreographers of the Opening dance item "Sisi Arundathee" organized by the Student Union of Faculty of Applied Sciences, USJ, Sri Lanka (2019)

- Participated in group of the low country dance item "Sisi Arundathee" organized by the Student Union of Faculty of Applied Sciences, USJ, Sri Lanka (2016-2019)
- Committee member in the organizing committee of Aurora Conference of Computer Science organized by the Society of Computer Science, of the Department of Computer Science, Faculty of Applied Sciences, USJ, Sri Lanka (2017)
- Team member of under seventeen netball and basketball teams, Sri Sumangala Balika Vidyalaya, Weligama, Sri Lanka (2011)
- Leader of Western Band (Melodica player, bass drum player, side drum player, symbol player) (2001-2011)
- Leader of Junior Western Band (Melodica player, bass drum player, side drum player, symbol player) (2006,2011)
- Leader of Primary Western Band (Melodica player, bass drum player, side drum player, symbol player) (2001,2005)

REFERENCES

Dr. Thiyanga S. Talagala
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Faculty of Applied Sciences,
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