**Statistics Without Borders**

**Statement of Work Form**

**SECTION I. BASIC INFORMATION**

**SWB Project Number**: 254

**Client Name**: University of Lagos, Department of Statistics

**Project Name**: UNILAG 2024 Data Science Bootcamp

**Client Project Contact Name**: Prof. M.O. Adamu

**SWB Project Contact**: Rose Ray

**Email**: rose.ray@gmail.com

**SECTION II. PROJECT REQUIREMENTS**

**About the Client Organization.**

The UNIVERSITY OF LAGOS (UNILAG)is a Federal Tertiary Institution established in 1962 by an Act of Parliament of the Federal Republic of Nigeria as encrypted in the University of Lagos Act l967 (as amended), Chapter U9 Laws of the Federal Republic of Nigeria, 2004 with its main campus at Akoka, Yaba, Lagos, Nigeria

The Statistics Department at UNILAG is part of the Faculty of Science.

The Department has over 100 undergraduates, more than 50 masters and doctoral postgraduate students, and about 20 academic and adjunct staff researching and working with collaborators both within and outside the university.

**Objectives: please state the objectives of the project briefly and concisely, including expected outputs, purpose, and any other expectations.**

The objective of the project is to aid the UILAG department of Statistics in the development and production of a two-week intensive Data Science course. The course will be attended both in person and via webinar. SWB contribution to instruction will be through webinar and online teaching.

**Background: please include the general background of the project.**

In 2023, the data science school was organized by the Department of Statistics, University of Lagos in conjunction with Statistics without Borders. The program took place between Monday 7th to Friday 18th August 2023 at the ABS-Communication and Information Technology System (ABS-CITS) building of the University of Lagos, Akoka, Lagos, Nigeria.

The program was sponsored by the University of Lagos, the Nigerian student chapter of the American Statistical Association, the Central Bank of Nigeria, and the Lagos State government Association, the Central Bank of Nigeria, and the Lagos State government.

During the program, both international and local facilitators presented lectures. Participants were students and staff from industries and government establishments, e.g. PG Statistics students across the country, students from other disciplines, a student from Ghana, Central Bank of Nigeria, and Lagos Bureau of Statistics and others. The lectures were delivered both in physical and virtual classes.

SWB project 254, is for a 2024 Data Science Bootcamp.

SWB will aid the University of Lagos in the production of a two-week 11-day Data Science Bootcamp. The Bootcamp is open to educators, government and industry personnel, students and other interested parties. It will be held August 19-30 at the University of Lagos and virtually via Zoom, 9am - 5pm WAT. Topics to be covered include: Data Analysis, Deep Learning, Machine Learning, Big Data Analytics, Data Mining. AI, Data Visualization, Database (including SQL) and Ethics. Training on Power BI, Google Data Studio, Tableau and Python will be covered.

SWB will propose daily curriculum, databases to be used for participant exercises, produce lectures and exercises, suggest a list of pre-bootcamp reading for bootcamp attendees and provide lecturers and tutors for the bootcamp.

**Scope: please list what is in scope for the project and what is out of scope.**

***In scope***: 1) Recommendation of order of presentation of topics for the Data science Bootcamp; 2.) Selection of one or two datasets to be used for participant exercises; 3.) Identification of speakers and tutors for each of the topics; 4.) Development of webinar for each topic; 5.) Development of training exercises for each topic; 6.) Training of tutors to aid bootcamp participants in the completion of the exercises. 7.) Speaker and tutor participation in the bootcamp.

**Out of Scope**: 1) Organization of physical location of the courses at UNILAG. 2.) Webinar technology.

**Additional Requirements: please list any specific skills required. such as language, software,** **specific methodologies, etc.**

**Language:** Project will be conducted in English

**Software/Tools:** none required. Knowledge of Data Science tools such as SQL, Python, Tableau is a plus.

**Methodology:** No specific methodology.

**Other:** Experience teaching and developing courses in Data Science, Data Analysis or Statistics is a plus. Experience with online teaching is highly desired.

This project requires that volunteer travel to the project site.

The client agrees to fund or reimburse travel expenses. Please describe specifics and any limits: Please explain travel

**SECTION III. PROJECT PARAMETERS**

**Definitions: please list exact, repeatable definitions including the population of interest, the target event, and any other necessary definitions, as applicable.**

Not Applicable

**Data: please list the sources, data types, volume, and general description of the contents for each data set.**

Not Applicable

**Analysis Periods: please list the dates of the data collected. If the project involves predictive modeling, please specify the prediction windows.**

Not Applicable

**Assumptions and Limitations: please list any major assumptions and limitations (statistical and otherwise) that impact the successful completion of the project.**

None

**Dependencies: please list all project dependencies.**

Scheduling of bootcamp presentations and training sessions will require coordination and interaction with the UNILAG Department of Statistics Faculty.

Regular meetings with Professor Adamu and his team and the SWB project 254 management team are planned.

**Project Risks: please list all known project risks not covered above.**

SWB may not be able to secure volunteer webinar speakers and tutors for every data science topic recommended, nor for as many hours per day as desired.

**Analysis Methodology and Approach: please list the project’s general methodology or approach (e.g. regression, DOE, etc.).**

No specific statistical methodology.

**Software & Tools: Please list any specific SWs/tools required or preferred (e.g. SAS, R, SPSS, Tableau Public, etc.).**

MicroSoft Word, PowerPoint and Excel for production of project deliverables.

Tableau, Python, Power BI and SQL for exercises using these tools.

**Follow-Up Analysis and Tasks: please state any specific analyses and tasks in the scope of the project. If none, please state that no follow-up tasks are in scope.**

Potential follow up project securing webinar speakers for twice monthly webinars of general statistical interest for the 2024/2025 term.

**Deliverables: please list specific deliverables, including the format of the output.**

PowerPoint presentations of lectures.

Selection of primary dataset to be used for exercises – link via GitHub

List of pre-bootcamp reading materials to be distributed to potential bootcamp participants.

Exercises for each topic – link via GitHub

Presentation of lectures and tutoring help during the bootcamp.

**SECTION IV. PROJECT LOGISTICS**

**Roles and Responsibilities: please list the SWB point of contact and the client point of contact for the project. Please list any other roles and responsibilities for the project.**

**SWB point of contact:** Rose Ray (rose.ray@gmail.com)

**Client point of contact:** Prof. M.O. Adamu (madamu@unilag.edu.ng)

**Other roles and responsibilities:** UNILAG Department of Statistics to provide some in person tutors to aid bootcamp participants complete the exercises for each topic.

**Timeline and workload:**

**Expected project duration (in weeks):** 22 weeks, ending August 30, 2024

**Expected team size (# volunteers):** 9 or 10 lecturers, 9 to 20 tutors, 1 project co-PCM (Nirmala Liyanage)

**Expected workload (hours per week):**

Will vary throughout the project:

April through June: Development of daily curriculum, lectures and exercises at the pace of SWB volunteers. Training materials and PowerPoint presentations to be completed by June 30. Suggestions for pre-bootcamp reading for potential bootcamp participants to be made by May 30.

July: one or two sessions of training of tutors. Refinement of training materials and PowerPoint presentations as needed.

August Bootcamp: each lecturer and tutor to be available for presenting lecture(s) and guiding students in exercise for the day(s) that their topic is taught.

Bootcamp is scheduled for August 19- August 30, 9am-5pm WAT. No lectures or training is scheduled for Sunday August 25,

**Hard Project End Date, if any (see dependencies and assumptions):** List of pre-bootcamp reading materials to be delivered to UNILAG by July 1, 2024.Final Webinar PowerPoint files and corresponding exercises to be completed and delivered to UNILAG by July 31, 2024. Training of tutors to be completed by July 31, 2024. Bootcamp ends August 30, 2024.

**Please include any details or specifics for the project plan. The more specific the project plan, the better.**

1. Interview and selection of lecturers and tutors, and assignment of Data Science topic to each.
2. Selection of dataset suitable for exercises in all topics
3. Lecturers to create one to two days of presentation and exercises. No more than two hours of lecture per day. Exercises to be planned for 5 to 6 hours per day.
4. Creating of pre-bootcamp reading list for potential bootcamp participants to use in preparation for attending bootcamp.
5. Lecturers to train tutors to help students complete the course exercises.
6. Bootcamp webinars and tutoring session via ZOOM.

**Expected frequency of progress review:** Biweekly and more frequently as needed near project dates of project deliverables.

**SECTION V. MISCELLANEOUS**

**Other Comments: please include any additional comments**

Not Applicable

**SECTION VI. ENGAGEMENT APPROACH AND CLIENT RESPONSIBILITIES**

Statistics Without Borders (SWB) provides clients access to volunteers who have been deemed qualified to participate in a project as requested, and provides management of its volunteers under its generally established standards. However, SWB expressly disclaims any and all warranties, whether express or implied, of the project outputs. Neither the ASA nor the SWB will sponsor projects directly, sanction, warrant, certify, or otherwise guarantee the work of its volunteers, project deliverables, or their products or derivatives. All services and deliverables are provided as is by the volunteers, and the client is responsible for reviewing the deliverables to ensure their accuracy and completeness and for the results obtained from its use of the deliverables. The volunteers have acknowledged to and are expected to perform project work to the best of his/her ability in a professional and ethical manner.

Furthermore, Client agrees to hold harmless, defend and indemnify Statistics Without Borders and the American Statistical Association and their respective members, directors, executive committees, officers, employees, agents, advisors, and representatives, and their successors and assigns (each, an “Indemnitee”), from and against any claim, demand, cause of action, complaint, suit, proceeding, judgment, award, loss, damage, or other liability, including reasonable attorneys’ fees, imposed upon or incurred by such Indemnitee by reason of or resulting from or in connection with this Statement of Work including, but not limited to, any work or other actions (or omissions) that are undertaken or occur with respect to this Statement of Work.

In addition,

* Client agrees to the Client Code of Conduct (<https://higherlogicdownload.s3.amazonaws.com/AMSTAT/ea9d01bf-dbfe-46f6-a681-fd7890cf1357/UploadedImages/About_SWB/SWB_COC_clients.pdf>).
* Client will notify SWB prior publishing and attributing the results or derivatives of this project to SWB.
* Client will not alter or otherwise misrepresent any results, findings, and/or recommendations delivered to the client by the SWB project team, publicly or privately.
* Client agrees that a lack of timely response to SWB request for input may result in a termination of the project at the discretion of SWB.
* Client agrees that post-delivery review and feedback will be limited to a maximum of three (3) iterations, and any further iterations will be considered a new project.
* Client agrees that it is its sole responsibility to retain copies of all data it provides for this project, to the extent allowable by applicable laws, in case it becomes necessary to replicate the analysis results or conduct additional analysis on the same data. SWB will not retain project data beyond 90 days following sign-off by Client of final project deliverables, or 120 days following the delivery of the final project deliverables, whichever is earlier, unless required otherwise in a separate agreement specifying an earlier purge or a longer retention.

If any rework is required beyond the control of SWB, SWB reserves the right to close the project and initiate a separate project.

**SECTION VII. AGREEMENTS**

Check all applicable, if any:

The client consents that the project results will be made public following the completion of the project. This includes public presentation and publication.

The data contains sensitive information. In order to protect the privacy of the data subjects, each volunteer with the access to the data will be required to sign the Data Security and Privacy Agreement. This may include future volunteers yet to be identified but who need to access the data after the project completion to fulfill tasks related to SWB’s operations; in this case, SWB will make a good faith effort to contact Client and will keep a copy of the agreement signed by the volunteer in case the contact cannot be established.

The client will be sharing information proprietary and confidential to the client, other than or in addition to the data. In order to protect the client secrets, each volunteer will be required to sign the Confidentiality Agreement. This may include future volunteers yet to be identified but who need to access the data after the project completion to fulfill tasks related to SWB’s operations; in this case, SWB will make a good faith effort to contact Client and will keep a copy of the agreement signed by the volunteer in case the contact cannot be established.

The project is subject to an IRB review\*. The Principal Investigator (PI) is responsible for the submission. The client agrees to provide evidence of IRB approval and that no work by SWB volunteers can begin until the IRB has approved the project.

PI Name: PI Name

PI Organization: PI organization

IRB Name: IRB Name

Comments: Comments

*\*Or equivalent depending on the country of the client as well as of the applicable subjects. For a useful international reference compiled by the U.S. Department of Health & Human Services, see:* [*https://www.hhs.gov/ohrp/international/index.html*](https://www.hhs.gov/ohrp/international/index.html)

**SECTION VIII. SIGN-OFF**

University of Lagos, Nigeria Department of Statisitcs agrees to this Statement of Work.

Professor M.O. Adamu Date