

SRI DHARMASTHALA MANJUNATHESHWARA COLLEGE
(AUTONOMOUS), UJIRE – 574240
(Re-Accredited at A++ Grade by NAAC)



INTERNSHIP 2022-23

*Internship Report submitted to the
Department of PG Studies and Research in Statistics,
SDM College (Autonomous), Ujire, in partial fulfilment of the degree of*

MASTER OF SCIENCE IN STATISTICS

by

Deepa Shree v

224006

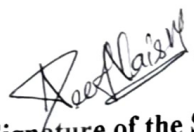
I M.Sc. Statistics (II Semester)

SDM College (Autonomous), Ujire

SEPTEMBER 2023

Date: 30/09/2023

Place: Ujire



Signature of the Student

DECLARATION

I **Deepa Shree v**, hereby declare that this internship report carried out in **Directorate of Economics and Statistics** has been prepared and submitted by me to the Department of PG Studies and Research in Statistics, SDM College (Autonomous), Ujire, as a partial fulfilment of the requirement of M.Sc. Statistics programme during the academic year 2023-24.

Date: 30/09/2023

Place: Ujire



Signature of the Student

(Deepa Shree v)

ACKNOWLEDGEMENT

*Firstly, I would like to thank our guide **Alamelu Mangamma** for giving us the opportunity to carry out the internship in **Directorate of economics and statistics** _*

*Now I would like to thank our Secretary **Dr. Satheeshchandra S.**, for providing us with this opportunity.*

*I would thank our Principal **Dr. B. A. Kumara Hegde** for his support in carrying out this internship.*

*I would also thank our Dean **Dr. Vishwanatha P.** for his guidance and encouragement.*

*My wholehearted gratitude to our Head of the Department **Dr. Savitha Kumari** for providing the opportunity and necessary facilities required for the completion of this internship.*

*I gratefully acknowledge my teachers of the Department **Ms. Supriya S. P.**, **Mr. Pradeep K.**, and **Ms. Shwetha Kumari**, Assistant Professors, for their constant encouragement, guidance and support throughout the internship.*

I am also thankful to all my family members and friends for their constant guidance and support in each step.

*Finally, to all those who helped me in many ways, I say **Thank You!***

(Deepa Shree v)

CONTENTS

Sl. No.	Title	Page No.
1.	About the Organization	5-6
2.	Organization Structure	7-8
3.	Day wise Internship Observation	9-10
4.	Acquired Skills and Experience	11
5.	Summary	12
6.	Annexure: Internship Certificate	13

ABOUT THE ORGANIZATION

The headquarters of Directorate of Economics and Statistics is situated at state capital Bengaluru. Directorate of Economics and Statistics is responsible for providing the necessary database for formulation of programmes and policies by the state. Statistical data on various socio-economic activities of the state are being collected, processed, analysed and published from time to time. The Directorate of Economics and Statistics is not only responsible for collecting statistical information directly through its own functionaries but also it collects a major part of the statistical information with the help of other departments. The main functions of DES can broadly classified as follows:

1. Collection , classification, tabulation, analysis and presentation of data on various socio-economic aspects of the state in a systematic manner and dissemination of the same through periodic publications.
2. Conducting sample surveys and other field enquiries etc, on various aspects of socio-economic development.
3. Collecting and preparing the report as per the programmes of government of India.
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The main Objective of the DES is to provide the decentralized structure of the system, reliable, timely and credible social and economic statistics, to assist decision making within and outside the government, stimulate research and promote informed debate relating to conditions affecting people's life.

ORGANIZATION STRUCTURE

The statistical system in Karnataka consists of the Directorate of Economics and Statistics (DES). The headquarters of the DES is situated at the State capital (Bengaluru) and is headed by the Director. It is functionally organized into seven technical divisions each headed by a Joint Director and one Administration and Accounts Division headed by the Administrative Officer in the rank of a Joint Director. The technical divisions are:-

- Agricultural Statistics Division (AGS)
- Agricultural Census, Rainfall and Computer Division (ARC)
- Civil Registration, National Sample Survey and Local Body Statistics Division (CNL)
- State income, Industries and Prices division (SIP) ,
- Publication Division (PTC), Co-ordination and planning (COP) attached to PTC division
- Economic Census Division
- Crop Insurance Division (CIS).

Each 'Division', is headed by a Joint Director and is divided into different sections. A group of sections, generally two or three is headed by Deputy Director. In all, there are 22 technical sections at the State Headquarters. Depending upon the workload each technical section is manned by Deputy Director/Assistant Directors/ Assistant Statistical Officers, Statistical Inspectors and Enumerators. The Administration and Accounts Division is manned by Superintendents, First Division Assistants and Second Division Assistants.

Each of the 30 districts of the State has a District Statistical Office headed by a District Statistical Officer in rank of a Deputy Director. The District Statistical Officer is assisted in technical matters, at the district headquarters, by the Assistant Director, Assistant Statistical Officers, Statistical Inspectors and Enumerators.

DAY WISE INTERNSHIP OBSERVATION REPORT

Day	Date	Observation
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24	20-09-2023	About NSSO portal and E janma portal
25	21-09-2023	About NBO and briks website
26	22-09-2023	Viva on things learnt in CNL division

ACQUIRED SKILLS AND EXPERIENCE

Skills and experience gained during the internship is valuable for future career in government sector. Here are some of the experience and skills acquired during my internship.

- Base level tasks – learnt how the works are done from the root level which are basic foundation for the further analysis.
- Sampling technique's – learnt how the different sampling methods are used for the surveys.
- Statistical formula's – acquired knowledge on how formula's are used for calculation's in different sections.
- Technical skills – learnt how to work on software called foxpro to manage and store the data and also excel which is widely used for making reports and few agricultural data apps
- Impact on career goals – this experience has influenced my career goals and aspiration in government field.
- Adaptive nature and team work – realized how to adapt to different situation's during our field work and learnt how team work helps to get a best results.
- Government policies, scheme's – realized how the government is taking steps to improve a individual's life by various schemes and policies.

SUMMARY

I have completed my internship in Directorate of Economics and Statistics, Bengaluru from 21/08/2023 to 22/09/2023.

I Acquired skills like how the data is managed in foxpro software, statistical formulas, working on agricultural data apps, sampling techniques etc., as well as soft skills like team work, adaptive nature, patience, root level works. In addition to this the most important aspect which I gained during my internship period was career guidance which showed me a way for my career in my interested field.

Overall, the internship was a great learning experience that solidified my passion for application of statistics in government field and equipped me with practical knowledge in this field. I express gratitude to internship supervisors, mentors for their guidance and support during the internship.



N. Madhuram

Director, Directorate of Economics & Statistics &
Ex-Officio State Agricultural Census Commissioner
Karnataka State

File NO. DES/COP/04/2023-24

Date:22.09.2023

ಪ್ರಮಾಣ ಪತ್ರ

SDM PG centre, Ujire, ಸಂಸ್ಥೆಯ ಕುಮಾರಿ ದೀಪಶ್ರೀ ವಿ. ರವರು ದಿನಾಂಕ:
21.08.2023ರಿಂದ 22.09.2023ರವರೆಗೆ ಆರ್ಥಿಕ ಮತ್ತು ಸಾಂಖ್ಯಿಕ ನಿರ್ದೇಶನಾಲಯದಲ್ಲಿ
Internಗಳಾಗಿ ಹಾಜರಾಗಿದ್ದು ಸದರಿ ಅವಧಿಯಲ್ಲಿ ನಿರ್ದೇಶನಾಲಯದ ವಿವಿಧ
ಚಟುವಟಿಕೆಗಳು/ಕಾರ್ಯಕ್ರಮಗಳಾದ ಕೃಷಿ ಗಣತಿ, ಜನನ ಮರಣ ನೋಂದಣಿ ಪದ್ಧತಿ, ಬೆಳೆ
ಅಂದಾಜು ಸಮೀಕ್ಷೆ, ಮಾದರಿ ಸಮೀಕ್ಷೆ, ಕೃಷಿ ಅಂಕಿ ಅಂಶಗಳು, ರಾಜ್ಯದ ಆಂತರಿಕ ಉತ್ಪನ್ನ
ತಲಾದಾಯ, ವಿವಿಧ ಬೆಳೆಗಳ ವಿಸ್ತೀರ್ಣ, ಇಳುವರಿ ಮತ್ತು ಉತ್ಪಾದನೆಗಳ ಬಗ್ಗೆ ಅಧ್ಯಯನ
ಮಾಡಿರುತ್ತಾರೆ ಎಂದು ಪ್ರಮಾಣೀಕರಿಸಲಾಗಿದೆ.

ಇವರ Internship ಅವಧಿಯು ತೃಪ್ತಿದಾಯಕವಾಗಿದೆ.

ನಿರ್ದೇಶಕರು
ನಿರ್ದೇಶಕರು
ಆರ್ಥಿಕ ಮತ್ತು ಸಾಂಖ್ಯಿಕ ನಿರ್ದೇಶನಾಲಯ
ಕರ್ನಾಟಕ ರಾಜ್ಯ ಬೆಂಗಳೂರು

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INTERNSHIP 2022-23

Internship Report submitted to the
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SDM College (Autonomous), Ujire, in partial fulfilment of the degree of

MASTER OF SCIENCE IN STATISTICS

By

DIVYASREE.C

224009

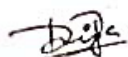
I M.Sc. Statistics (II Semester)

SDM College (Autonomous), Ujire

SEPTEMBER 2023

Date: 23/09/2023

Place: Ujire

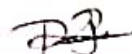

Signature of the Student

DECLARATION

I Divyasree.C hereby declare that this internship report carried out in International Institute of Migration and Development (IIMAD) has been prepared and submitted by me to the Department of PG Studies and Research in Statistics, SDM College (Autonomous), Ujire, as a partial fulfilment of the requirement of M.Sc. Statistics programme during the academic year 2022-23.

Date:

Place:



Signature of the Student

Divyasree.C

ACKNOWLEDGEMENT

Firstly, I would like to thank our guide Dr. Irudaya Rajan for giving us the opportunity to carry out the internship in International Institute of Migration and Development (IIMAD).

Now I would like to thank our Secretary Dr. Satheeshchandra., for providing us with this opportunity.

I would thank our Principal Dr. B. A. Kumara Hegde for his support in carrying out this internship.

I would also thank our Dean Dr. Vishwanatha P. for his guidance and encouragement.

My wholehearted gratitude to our Head of the Department Dr. Savitha Kumari for providing the opportunity and necessary facilities required for the completion of this internship.

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Disruption 17

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Divyasree.C

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ABOUT THE ORGANIZATION

The International Institute of Migration and Development (IIMAD) is a centre for academic research devoted to all aspects of international migration. IIMAD aims to advance new thinking of migration and be India's largest interdisciplinary research network in migration and regroups a new nexus of international migration experts. Migration is part of our life and wish to establish ourselves to create a platform for debate, research, policy analysis and community engagement on global, national and local scales. IIMAD collaborates with government and non-government organizations that deal with Refugees, diasporic migrants, and migrant workers in the region.

ORGANIZATION STRUCTURE

The International Institute of Migration and Development tries to serve as a node in the domain of migration with excellence in cutting edge academic scholarship that fosters practice-oriented research and policy formulation pertaining to international migration. The IIMAD breaks the academic drought on the indispensable area of migration which is ignored often. The IIMAD, with its distinguished scholar community, works to develop a new thematic pathway and facilitate the future scholars to disseminate knowledge through academic publications, data banks and conferencing. Our firm commitment to intellectual exploration and widening participation nationally and internationally builds as an agglomeration of migrants voyaging for the betterment of migrants.

The founder president of IIMAD is K C Zachariah and the founder chair is Dr. Irudaya Rajan. The institute contains around 10-12 staffs. And all are specialized in different fields like Researchers, Surveys head, Data Management etc. And the staff were highly qualified in their field.

DAY WISE INTERNSHIP OBSERVATION REPORT

Day	Date	Observation
1	21-08-2023	Introduction to the nature of the work.
2	22-08-2023	Basic Excel class and taught data entry. A research fellow showed some functions he use in Rstudio. Excel class, Data entry of KAS survey, made newsletters.
3	23-08-2023	
4	24-08-2023	Data entry of KAS survey and Assisted researchers.
5	25-08-2023	Onam celebration.
		Data entry of KAS survey, Studied some research papers and assisted researchers.
6	26-08-2023	
		Data Entry of KAS survey and helped to find some migration related research papers.
7	28-08-2023	
		Data entry of KAS survey, R programming class was there in R-studio.
8	30-08-2023	
9	31-08-2023	Data entry of KAS survey and assisted research staffs. Read a few articles and made literature reviews

10	01-09-2023	Data entry of KAS survey, R programming class by a Professional
11	02-09-2023	Data entry of KAS survey, Continuation of R programming class.
12	04-09-2023	Data entry of KAS survey and A Session with Head of the institute Dr. Irudaya Rajan sir.
13	06-09-2023	Went for data collection for KMS (Kerala Migration Survey)
14	07-09-2023	Went for data collection for KMS (Kerala Migration Survey)
15	08-09-2023	Went for data collection for KMS (Kerala Migration Survey)
16	09-09-2023	Went for data collection for KMS (Kerala Migration Survey)

ACQUIRED SKILLS AND EXPERIENCE

The Experience working there was good and I got to know more about migration in India as well as in Kerala. The got know how data entry is done. Also, grateful to be the part of Kerala migration survey. happy to contribute my part in it. And got to know about R studio. Skill that I acquired from there is how to do data collection, R studio, know to form questionnaire. And got some idea about research papers.

The entire team was supportive and creative. And it was good to be a part of IIMAD. And working with Dr. Irudaya Rajan was like learning how a dedicated person should work. Overall it was a good experience.

SUMMARY

I Divyasree.c has started my internship in IIMAD from 21st August 2023 to ended in 9th September 2023 including field visit. The skill that I acquired from the IIMAD was informative and helpful for my future career. It will help me how to conduct a survey in future and what all I should look into while taking a large data. And what to after data is got how to analyses it and all. Over all working experience was informative and worth learning. Got to know about R studio, Data entry and how excel is used in large scale data. I express my sincere gratitude towards the supervisors, mentors and all who guided me during this internship.

ANNEXURE

Internship Certificate



Certificate of Internship Completion

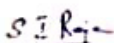
This is to certify that Ms. Divyasree C., pursuing MSc Statistics, Sri Dharmasthala Manjunatheshwara college, Ujire, has successfully completed her two week internship at The International Institute of Migration and Development (IIMAD), Thiruvananthapuram, under my guidance from 21st August to 9th September, 2023.

During her time as a research intern here, she received guidance in basic qualitative and quantitative research as well as numerous academic activities such as literature review, research question formulation, data input for large scale surveys, and the fundamentals of Excel and R base software. She also participated in the fieldwork for the Kerala Migration Survey 2023.

I found her inquisitive and hardworking. Her association with the institute was fruitful as she performed her responsibilities with diligence.

I wish her the best for all her future endeavors.

Yours sincerely,



S. Indraya Rajan
Chair

The International Institute of Migration and Development
Email: rajan@iimad.org



 iimad.org

THE INTERNATIONAL INSTITUTE OF
MIGRATION & DEVELOPMENT

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by

Harshith M C

224011

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SDM College (Autonomous), Ujire

SEPTEMBER 2023

Date: 30/09/2023

Place: Ujire.

Harshith
Signature of the Student

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ACQUIRED SKILLS AND EXPERIENCE

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SUMMARY

I have completed my internship in Directorate of Economics and Statistics, Bengaluru from 21/08/2023 to 22/09/2023.

I Acquired skills like how the data is managed in foxpro software, statistical formulas, working on agricultural data apps, sampling techniques etc., as well as soft skills like team work, adaptive nature, patience, root level works. In addition to this the most important aspect which I gained during my internship period was career guidance which showed me a way for my career in my interested field.

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ಎನ್. ಮಾಧುರಾಮ್
ನಿರ್ದೇಶಕರು, ಆರ್ಥಿಕತೆ ಮತ್ತು ಸಂಖ್ಯಾಶಾಸ್ತ್ರ ವಿಭಾಗ, ಕರ್ನಾಟಕ ಸರ್ಕಾರ
ಬೆಂಗಳೂರು

N. Madhuram
Director, Directorate of Economics & Statistics &
Ex-Officio State Agricultural Census Commissioner
Karnataka State



ಫೈಲ್ ನಂ: DES-COP/04/2023-24
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Dr. B.R. Ambedkar Vardha
Bengaluru, 560001

File NO. DES/COP/04/2023-24

Date:22.09.2023

ಪ್ರಮುಖ ಘಟನೆ

SDM PG centre, Ujire, ಸಂಸ್ಥೆಯ ಶ್ರೀ. ಹರ್ಷಿತ್ ಎಂ.ಸಿ. ಕವರು ದಿನಂಕಿ:
21.08.2023ರಿಂದ 22.09.2023ರವರೆಗೆ ಆರ್ಥಿಕ ಮತ್ತು ಸಂಖ್ಯಾಶಾಸ್ತ್ರ ನಿರ್ದೇಶನಾಲಯದಲ್ಲಿ
Internship ಹಾಜರಾಗಿದ್ದು ಸದರಿ ಅವಧಿಯಲ್ಲಿ ನಿರ್ದೇಶನಾಲಯದ ವಿವಿಧ
ಸಿಬ್ಬಂದಿಗಳು/ಕಾರ್ಯಕ್ರಮಗಳಾದ ಕೃಷಿ ಗಣತಿ, ಜನನ ಮರಣ ನೋಂದಣಿ ಪದ್ಧತಿ, ಬೆಳೆ
ಲಂದಾಜು ಸಮೀಕ್ಷೆ, ಮಾದರಿ ಸಮೀಕ್ಷೆ ಕೃಷಿ ಅಂಕಿ ಅಂಶಗಳು, ರಾಜ್ಯದ ಆರೋಗ್ಯ ಉತ್ಪನ್ನ,
ತರಬಾಳೆ, ವಿವಿಧ ಬೆಳೆಗಳ ವಿಸ್ತಾರ, ಇಳುವರಿ ಮತ್ತು ಉತ್ಪಾದನೆಗಳ ಬಗ್ಗೆ ಅವರ
ಮಾಹಿತಿಗಾಗಿ ಎಂದು ಪ್ರಮಾಣೀಕರಿಸಲಾಗಿದೆ.

ಇವರ Internship ಅವಧಿಯು ಕೈಪಿಡಾಯಿತಾಗಿದೆ.

ನಿರ್ದೇಶಕರು
ಆರ್ಥಿಕ ಮತ್ತು ಸಂಖ್ಯಾಶಾಸ್ತ್ರ ನಿರ್ದೇಶನಾಲಯ
ಬೆಂಗಳೂರು

SRI DHARMASTHALA MANJUNATHESHWARA COLLEGE

(AUTONOMOUS), UJIRE – 574240

(Re-Accredited at A++ Grade by NAAC)



INTERNSHIP 2022-23

*Internship Report submitted to the
Department of PG Studies and Research in Statistics,
SDM College (Autonomous), Ujire, in partial fulfilment of the degree of*

MASTER OF SCIENCE IN STATISTICS

by

ARYA RAJAN T

224001

I M.Sc. Statistics (II Semester)

SDM College (Autonomous), Ujire

SEPTEMBER 2023

Date: 23/09/2023

Place: Ujire

Signature of the Student

DECLARATION

I **Arya Rajan T**, hereby declare that this internship report carried out in **International Institute of Migration and Development (IIMAD)** has been prepared and submitted by me to the Department of PG Studies and Research in Statistics, SDM College (Autonomous), Ujire, as a partial fulfilment of the requirement of M.Sc. Statistics programme during the academic year 2022-23.

Date: 23/09/2023

Place: Ujire



Signature of the Student

Arya Rajan T

ACKNOWLEDGEMENT

*Firstly, I would like to thank our guide **Dr. Irudaya Rajan** for giving us the opportunity to carry out the internship in **International Institute of Migration and Development (IIMAD)**.*

*Now I would like to thank our Secretary **Dr. Satheeshchandra.**, for providing us with this opportunity.*

*I would thank our Principal **Dr. B. A. Kumara Hegde** for his support in carrying out this internship.*

*I would also thank our Dean **Dr. Vishwanatha P.** for his guidance and encouragement.*

*My wholehearted gratitude to our Head of the Department **Dr. Savitha Kumari** for providing the opportunity and necessary facilities required for the completion of this internship.*

*I gratefully acknowledge my teachers of the Department **Ms. Supriya S. P.**, **Mr. Pradeep K.**, and **Ms. Shwetha Kumari**, Assistant Professors, for their constant encouragement, guidance and support throughout the internship.*

I am also thankful to all my family members and friends for their constant guidance and support in each step.

*Finally, to all those who helped me in many ways, I say **Thank You!***

Arya Rajan T

CONTENTS

Sl. No.	Title	Page No.
1.	About the Organization	5
2.	Organization Structure	6
3.	Day wise Internship Observation	7 - 8
4.	Acquired Skills and Experience	9
5.	Summary	10
6.	Annexure: Internship Certificate	11

ABOUT THE ORGANIZATION

The International Institute of Migration and Development (IIMAD) is a centre for academic research devoted to all aspects of international migration. IIMAD aims to advance new thinking of migration and be India's largest interdisciplinary research network in migration and regroups a new nexus of international migration experts. We believe that migration is part of our life and wish to establish ourselves to create a platform for debate, research, policy analysis and community engagement on global, national and local scales. IIMAD collaborates with government and non-government organizations that deal with Refugees, diasporic migrants, and migrant workers in the region.

ORGANIZATION STRUCTURE

The International Institute of Migration and Development tries to serve as a node in the domain of migration with excellence in cutting edge academic scholarship that fosters practice-oriented research and policy formulation pertaining to international migration. The IIMAD breaks the academic drought on the indispensable area of migration which is ignored often. The IIMAD, with its distinguished scholar community, works to develop a new thematic pathway and facilitate the future scholars to disseminate knowledge through academic publications, data banks and conferencing. Our firm commitment to intellectual exploration and widening participation nationally and internationally builds as an agglomeration of migrants voyaging for the betterment of migrants.

The founder president of IIMAD is K C Zachariah and the founder chair is Dr. Irudaya Rajan. The institute contains around 10-12 staffs. And all are specialized in different fields like Researchers, Surveys head, Data Management etc. And the staff were highly qualified in their field.

DAY WISE INTERNSHIP OBSERVATION REPORT

Day	Date	Observation
1	21-08-2023	Introduction ti the nature of the work.
2	22-08-2023	Basic Excel class and taught data entry.
3	23-08-2023	Excel class, Data entry of KAS survey, made newsletters.
4	24-08-2023	Data entry of KAS survey and Assisted researchers.
5	25-08-2023	Onam celebration.
6	26-08-2023	Data entry of KAS survey, Studied some research papers and assisted researchers.
7	28-08-2023	Data Entry of KAS survey and helped to find some migration related research papers.
8	30-08-2023	Data entry of KAS survey, R programming class was there in R-studio.
9	31-08-2023	Data entry of KAS survey and assisted research staffs
10	01-09-2023	Data entry of KAS survey, R programming class by Professional
11	02-09-2023	Data entry of KAS survey, Continuation of R programming
12	04-09-2023	Data entry of KAS survey and A Session with Head of the institute Dr. Irudaya Rajan sir.
13	06-09-2023	Went for data collection for KMS (Kerala Migration Survey



14	07-09-2023	Went for data collection for KMS (Kerala Migration Survey
15	08-09-2023	Went for data collection for KMS (Kerala Migration Survey
16	09-09-2023	Went for data collection for KMS (Kerala Migration Survey

ACQUIRED SKILLS AND EXPERIENCE

The Experience working there was good and I got to know more about migration in India as well as in Kerala. The got know how data entry is done. Also, grateful to be the part of Kerala migration survey. happy to contribute my part in it. And got to know about R studio. Skill that I acquired from there is how to do data collection, R studio, know to form questionnaire. And got some idea about research papers.

The entire team was supportive and creative. And it was good to be a part of IIMAD. And working with Dr. Irudaya Rajan like learning how a dedicated person should work. Overall it was a good experience.

SUMMARY

I Arya Rajan T has started my internship in IIMAD from 21st August 2023 to ended in 9th September 2023 including field visit.

The skill that I acquired from the IIMAD was informative and helpful for my future career. It will help me how to conduct a survey in future and what all I should look into while taking a large data. And what to after data is got how to analyses it and all.

Overall working experience was informative and worth learning. Got to know about r studio, Data entry and how excel is used in large scale data. I express my sincere gratitude towards the supervisors, mentors and all who guided me during this internship.

ANNEXURE

Internship Certificate



Certificate of Internship Completion

This is to certify that Ms. Arya Rajan T, pursuing MSc Statistics, Sri Dharmasthala Manjunatheshwara college, Ujire, has successfully completed her two week internship at The International Institute of Migration and Development (IIMAD), Thiruvananthapuram, under my guidance from 21st August to 9th September, 2023.

During her time as a research intern here, she received guidance in basic qualitative and quantitative research as well as numerous academic activities such as literature review, research question formulation, data input for large scale surveys, and the fundamentals of Excel and R base software. She also participated in the fieldwork for the Kerala Migration Survey 2023.

I found her inquisitive and hardworking. Her association with the institute was fruitful as she performed her responsibilities with diligence.

I wish her the best for all her future endeavors.

Yours sincerely,

S. Irudaya Rajan
Chair

The International Institute of Migration and Development
Email: rajan@iimad.org



SRI DHARMASTHALA MANJUNATHESHWARA COLLEGE
(AUTONOMOUS), UJIRE - 574240
(Re-Accredited at A++ Grade by NAAC)



INTERNSHIP 2022-23

*Internship Report submitted to the
Department of PG Studies and Research in Statistics,
SDM College (Autonomous), Ujire, in partial fulfillment of the degree of*

MASTER OF SCIENCE IN STATISTICS


by

Shetty Nikitha Karunakar
224020

I M.Sc. Statistics (II Semester)
SDM College (Autonomous), Ujire

SEPTEMBER 2023

Date: 05/09/23
Place: Ujire.


Signature of the Student

DECLARATION

I Ms.Shetty Nikitha Karunakar hereby declare that this internship report carried out in **IoTracX a startup company Madhav Nagar, Mutbi, Manipal** has been prepared and submitted by me to the Department of PG Studies and Research in Statistics, SDM College (Autonomous), Ujire, as a partial fulfillment of the requirement of M.Sc. Statistics program during the academic year 2022-23.

Date: 05/09/23
Place: Ujire



Signature of the Student
Shetty Nikitha Karunakar

ACKNOWLEDGEMENT

Firstly, I would like to thank our guide Vageesh Bhat for giving us the opportunity to carry out the internship in IoTracX a startup company Madhav Nagar, mutbi, Manipal.

Now I would like to thank our Secretary Dr. Satheeshchandra S., for providing us with this opportunity.

I would thank our Principal Dr. B. A. Kumara Hegde for his support in carrying out this internship.

I would also thank our Dean Dr. Vishwanatha P. for his guidance and encouragement.

My wholehearted gratitude to our Head of the Department Dr. Savitha Kumari for providing the opportunity and necessary facilities required for the completion of this internship.

I gratefully acknowledge my teachers of the Department Ms. Supriya S. P., Mr. Pradeep K., and Ms. Shwetha Kumari, Assistant Professors, for their constant encouragement, guidance, and support throughout the internship.

I am also thankful to all my family members and friends for their constant guidance and support in each step.

Finally, to all those who helped me in many ways, I say Thank You!

(Shetty Nikitha Karunakar)

CONTENTS

SL. No.	Title	Page No.
1	About the Organization	5
2	Organization Structure	6
3	Day-wise Internship Observation	7
4	Acquired Skills and Experience	8
5	Summary	9
6	Annexure: Internship Certificate	10

ABOUT THE ORGANIZATION

IoTracX, established in 2016 and led by CEO Gopi S, is a technology powerhouse headquartered in Bangalore, Karnataka. It specializes in IoT (Internet of Things), AI (Artificial Intelligence), and Blockchain technologies, with a strategic focus on seamlessly integrating these innovations into various business ecosystems. IoTracX offers a comprehensive range of plug-and-play components, including both standardized and custom solutions, meticulously designed to enhance operational, business, and service processes across diverse sectors such as Smart Cities, Connected Inventory Management, and Smart Agriculture.

At the core of IoTracX's technological infrastructure is a sophisticated product platform intricately linked to the XaaSense cloud, a dynamic cloud system engineered for efficient data management and analytics. IoTracX takes a solution-centric approach, exemplified by its AI-powered advisory solutions, primarily benefiting the Agriculture sector. Notably, the company actively pioneers the development of a state-of-the-art Management Information System (MIS) tailored for comprehensive data capture and analysis.

IoTracX has made a significant mark in the industry, underpinned by its unwavering commitment to innovation and transformative contributions to the tech landscape. Remarkably, the company operates efficiently with a compact yet highly proficient team. Additionally, IoTracX has a branch in Manipal, operational for one year, demonstrating its expanding influence and dedication to technological excellence. My internship experience at IoTracX has further fueled my enthusiasm for these groundbreaking technologies, providing me with invaluable insights into their real-world applications.

DAY-WISE INTERNSHIP OBSERVATION REPORT

Day	Date	Observation
1	17-08-2023	Commencing Familiarization with Core Concepts of Project Paradigm
2	18-08-2023	Acquiring Insight into Redis Database Infrastructure Setup and Functionality
3	19-08-2023	Investigating Diverse Redis Data Types and their Architectural Framework
4	20-08-2023	Holiday
4	21-08-2023	Crafting Python Scripts for CRUD Operations Across Varied Redis Data Types
5	22-08-2023	Induction into the Fundamentals of Web Scraping
6	23-08-2023	Exploration of Varied Libraries Employed in Web Scraping Domain
7	24-08-2023	Applications of Web Scraping Methodology
8	25-08-2023	Extraction and Compilation of Information from an E-commerce Platform encompassing 100 Products
9	26-08-2023	Project Work
9	27-08-2023	Holiday
10	28-08-2023	Project Work
13	29-08-2023	Hash-Based Product Details Retrieval
14	30-08-2023	Hash-Based Product Details Retrieval
15	31-08-2023	Research on Government Websites (FDA, FSSAI, EFSA)
16	01-09-2023	Project Work
17	02-09-2023	Manual Web Scraping of FDA(USA) Data
18	03-09-2023	Holiday
19	04-09-2023	Manual Scraping of FDA file.
20	05-09-2023	Project work.
21	06-09-2023	Study on Pdf scraping and Library Exploration
22	07-09-2023	PDF Scraping of FSSAI(India) Data
23	08-09-2023	Project Work
24	09-09-2023	Project Work
25	10-09-2023	Sunday
26	11-09-2023	Study on Table scraping and different libraries.
27	12-09-2023	Table Scraping of EFSA Tabular Data
28	13-09-2023	Project Work
29	14-09-2023	Ingredient Matching and Extraction from FDA, FSSAI, and EFSA Data Sources
30	15-09-2023	Project Work
31	20-09-2023	Submission of Project related files

ACQUIRED SKILLS AND EXPERIENCE

Acquired skills

- Redis Mastery
- Advanced Web Scraping
- Data Manipulation Expertise
- Data Matching Mastery
- Data Validation Proficiency
- Data Cleansing Excellence
- Advanced Data Analysis
- Python Programming Mastery

Experiences Gained

1. Practical Redis Application
2. Diverse Web Scraping Projects
3. Data Integration and Comparative Analysis
4. Effective Collaborative Endeavors
5. Immersive Industry Engagements
6. Data-Driven Decision-Making Contributions
7. Strategic Problem Solving

SUMMARY

My internship journey at IoTracX, Manipal, spanning from August 17 to September 20, 2023, was a transformative experience that delved into the realms of technology and data analysis. IoTracX, a pioneer in IoT, AI, and Blockchain technologies, offered a unique opportunity to explore and apply cutting-edge tech innovations under the visionary leadership of CEO Gopi S. and our dedicated mentors, including Vageesh Bhat.

The central objective of our project, guided by our mentors, was to conduct a comprehensive safety assessment of children's products. This task allowed us to gain valuable insights into data collection and analysis methods critical for product safety evaluations. We were introduced to the intricacies of accurate and comprehensive data gathering, emphasizing the significance of data-driven decision-making in assessing the suitability of kids' products for consumption. This internship honed our skills in data modeling, an essential facet of developing effective analytical tools.

One of the cornerstones of our internship was the meticulous application of data cleaning techniques to ensure the quality and accuracy of our dataset. We also ventured into data visualization, a pivotal aspect that enabled us to convey our findings clearly and persuasively. Our proficiency in Python programming, under the mentorship of Vageesh Bhat and CEO Gopi S., was put to the test as we efficiently manipulated and analyzed data, developing models and algorithms to identify patterns and potential risks associated with specific children's products.

However, what made this experience truly transformative was the unwavering support and mentorship of our lecturers from SDM College (Autonomous), Ujire, in addition to our mentors from IoTracX. Their combined expertise, encouragement, and guidance played a pivotal role in our growth.

Active participation in collaborative projects provided a platform to further enhance our problem-solving abilities and teamwork skills, with guidance from both our mentors. The challenges we encountered and overcame during this internship not only expanded our knowledge but also bolstered our resilience and adaptability.

In conclusion, this internship not only addressed a critical concern regarding the safety of children's products but also equipped us with invaluable skills in data modeling, data cleaning, data visualization, and Python programming. It significantly broadened our horizons, preparing us for future data-driven endeavors and ensuring our ability to make informed decisions based on data analysis. This transformative experience ignited our passion for technology and data analysis, paving the way for promising opportunities in the ever-evolving tech landscape.

ANNEXURE
Internship Certificate



Internship Certificate

Date: 12th Sep 2023

To Whom It May Concern:

This is to certify that below student has completed the internship with Lotracks Pvt Ltd from 1st Aug 2023 to 20th Sep 2023 as required for the project.

Shruti Nikitha Karimaker

MSc Statistics, 2nd Semester

In Dharmacharya Mangalalokwata College (Autonomous) PG Centre, Uppur, Karnataka, 574240
email id: shrutinikitha@dmcl.ac.in

Her major responsibilities included deep understanding of AI product development, working on database Redis, Python, data collection, market research, scraping for food & nutrition related.

We at Lotracks Pvt Ltd wish her all success in her future endeavours.



For

Lotracks Pvt Ltd

Mangal, Udupi

HRD 402-A, Bangalore

CONTACT@lotracks.com
www.lotracks.com

Bangalore, India



SRI DHARMASTHALA MANJUNATHESHWARA COLLEGE
(AUTONOMOUS), UJIRE – 574240
(Re-Accredited at A++ Grade by NAAC)



INTERNSHIP 2022-23

*Internship Report submitted to the
Department of PG Studies and Research in Statistics,
SDM College (Autonomous), Ujire, in partial fulfillment of the degree of*

MASTER OF SCIENCE IN STATISTICS

by

Divya
224008

I M.Sc. Statistics (II Semester)
SDM College (Autonomous), Ujire

SEPTEMBER 2023


Date: 25/09/2023
Place: UJIRE


Signature of the Student

DECLARATION

I Divya hereby declare that this internship report carried out in IoTracX a startup company Madhav Nagar, Mutbi, Manipal has been prepared and submitted by me to the Department of PG Studies and Research in Statistics, SDM College (Autonomous), Ujire, as a partial fulfillment of the requirement of M.Sc. Statistics program during the academic year 2022-23.

Date: 25/09/2023.
Place: UJIRE


Signature of the Student
Divya

ACKNOWLEDGEMENT

Firstly, I would like to thank our guide **Vageesh Bhat** for giving us the opportunity to carry out the internship in **IoTracX a startup company** **Madhav Nagar, Mutbi, Manipal, Karnataka 576104**.

Now I would like to thank our Secretary **Dr. Satheeshchandra S.**, for providing us with this opportunity.

I would thank our Principal **Dr. B. A. Kumara Hegde** for his support in carrying out this internship.

I would also thank our Dean **Dr. Vishwanatha P.** for his guidance and encouragement.

My wholehearted gratitude to our Head of the Department **Dr. Savitha Kumari** for providing the opportunity and necessary facilities required for the completion of this internship.

I gratefully acknowledge my teachers of the Department **Ms. Supriya S. P.**, **Mr. Pradeep K.**, and **Ms. Shwetha Kumari**, Assistant Professors, for their constant encouragement, guidance, and support throughout the internship.

I am also thankful to all my family members and friends for their constant guidance and support in each step.

Finally, to all those who helped me in many ways, I say **Thank You!**

(Divya)

CONTENTS

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1	About the Organization	5
2	Organization Structure	6
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ORGANIZATION STRUCTURE

Leadership Team:

- CEO: Gopi S.

Departments/Divisions:

- IoT Technology Division
- AI Technology Division
- Blockchain Technology Division
- Product Development Division
- Data Management and Analytics Division
- Advisory Solutions Division
- MIS Development Division

Regional/Branch Offices:

- Headquarters
 - Location: Bangalore, Karnataka
- Branch Office
 - Location: Madhav Nagar, Mutbi, Manipal, Karnataka 576104

Strategic Focus Areas:

- Smart Cities
- Connected Inventory Management
- Smart Agriculture

Technological Infrastructure:

- XaaSense Cloud Team: Responsible for the dynamic cloud system used for data management and analytics.

Internship and Training Programs:

- Mentor: Vageesh Bhat
- Mentor's Designation: Project Manager

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6. Data-Driven Decision-Making Contributions
7. Strategic Problem Solving

SUMMARY

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One of the cornerstones of our internship was the meticulous application of data cleaning techniques to ensure the quality and accuracy of our dataset. We also ventured into data visualization, a pivotal aspect that enabled us to convey our findings clearly and persuasively. Our proficiency in Python programming, under the mentorship of Vageesh Bhat and CEO Gopi S., was put to the test as we efficiently manipulated and analyzed data, developing models and algorithms to identify patterns and potential risks associated with specific children's products.

However, what made this experience truly transformative was the unwavering support and mentorship of our lecturers from SDM College (Autonomous), Ujire, in addition to our mentors from IoTracX. Their combined expertise, encouragement, and guidance played a pivotal role in our growth.

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In conclusion, this internship not only addressed a critical concern regarding the safety of children's products but also equipped us with invaluable skills in data modeling, data cleaning, data visualization, and Python programming. It significantly broadened our horizons, preparing us for future data-driven endeavors and ensuring our ability to make informed decisions based on data analysis. This transformative experience ignited our passion for technology and data analysis, paving the way for promising opportunities in the ever-evolving tech landscape.

ANNEXURE
Internship Certificate



Internship Certificate

Date: 22nd SEP 2023

To Whom It May Concern

This is to confirm that below student has completed the internship with IoTTracX Pvt Ltd from 17th Aug 2023 to 20th Sep 2023 as required for the project.

Divya

MSc Statistics, 2nd Semester

Sri Dharmasthala Manjunatheshwara College (Autonomous) PG Centre, Ujire, Karnataka-574240

email-id: divyasukhanand@gmail.com

Her major responsibilities included deep understanding of AI product development, working on database Redis, Python, data collection, market research, scrapping for food & nutrition model.

We at (IoTTracX Pvt Ltd) wish her all success in her future endeavours.



HR

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