# Sree Chitra Thirunal College of Engineering

## DEPARTMENT OF COMPUTER SCIENCE

### RESEARCH CHALLENGES IN DATA ANALYTICS

## Agenda for Inauguration on 6th December 2018

Prayer Song

Welcome Speech : Dr. Jayasudha J. S, Dean (Academic)

Presidential Address : Dr. K. Prabhakaran Nair, Principal

Inaugural Address and Inauguration : Dr. Shashi Tharoor

Hon'ble Member of Parliament

Felicitations : Prof. Sarathchandradas

Dean (PG studies)

Dr. Ajith R

Dean (Student Affairs)

Vote of Thanks : Dr. Subu Surendran, HOD (CSE)

# Report

## Short Term Course on "Research Challenges in Data Analytics"

**6th to 13th December 2018**



**Department of Computer Science & Engineering**

## Sree Chitra Thirunal College of Engineering

Sponsored by

**APJ Abdul Kalam Technological University**

Approved by

**Directorate of Technical Education**

To

       The Joint Director

       Academics Section

       APJ Abdul Kalam Technological University

       Thiruvananthapuram

Sir,

       Sub: SCTCE - Releasing the fund after the completion of KTU funded Short Term

          Course –  forwarding audited expenditure statement and program details - reg.

       I am forwarding herewith the audited expenditure statement and program details of KTU funded Short Term Course on "Research Challenges in Data Analytics" organized by Department of Computer Science and Engineering from 6th December to 13th December 2019 for releasing the amount spent by the institution.

       Thanking you,

                                 Yours faithfully,

                                 **PRINCIPAL**

**SHORT TERM COURSE ON "RESEARCH CHALLENGES IN DATA ANALYTICS" HELD FROM 6TH TO 13TH DECEMBER 2108**

| NAME AND ADDRESS OF COLLEGE | DEPARTMENT | TITLE OF SHORT TERM COURSE | ACCOUNT DETAILS(FOR CREDITING THE AMOUNT) |
|---|---|---|---|
| Sree Chitra Thirunal College of Engineering | Computer Science and Engineering | Research challenges in data analytics | Account No: 67066395303<br>Account name: NTIT   SCTCE<br>Branch Name: State Bank of India<br>SCT Engineering College Branch, Pappanamcode, Thiruvananthapuram<br>IFSC Code:SBIN0070851 |

The Department of Computer Science and Engineering of Sree Chitra Thirunal College of Engineering had conducted Short Term Course on "Research Challenges in Data Analytics", sponsored by APJ Abdul Kalam Technological University and approved by Directorate of Technical Education from 6th to 13th December 2018. The expenditure for the course is given in the table. The detailed bills/ vouchers and other supporting documents are attached. The total expenditure is **Rs.1,54,088/- (One lakh fifty four thousand and eighty eight only)**. Please take necessary steps to grant the amount and transfer the same to the Account No: 67066395303, Account name: NTIT SCTCE, Branch Name: State Bank of India, SCT Engineering College Branch, IFSC Code:SBIN0070851.

| No | Item | Amount |
|----|------|--------|
| 1 | Honorarium to faculty/ External experts | Rs. 40,000 |
| 2 | TA to external experts | Rs.13830 |
|   | Local Conveyance to External experts | Rs.1900 |
| 3 | Accommodation to external experts | Rs 1920 |
| 4 | Honorarium to centre coordinator | Rs.7,500 |
| 5 | Honorarium to course coordinator | Rs.7,500 |
| 6 | Honorarium to technical assistants for venue arrangement, purchase assistance, data entry etc. (Please specify the number of persons employed for these activities) | Rs 10,000 (4 persons) |
| 7 | Cost of training material (Soft Copy / Hard copy / text book etc, Please specify the cost per participant) | Rs 4,100 |
| 8 | Cost of stationeries, consumables, certificate printing, report printing, photography etc. | Rs.14,338 |
| 9 | Food & refreshments to external experts / Guests | Rs. 5,194 |
| 10 | Food & refreshments to participants | Rs. 45756 |
| 11 | Any other items (Please specify) | Nil |
| 12 | Miscellaneous | Rs.2,050 |
|   | TOTAL | **Rs.1,54,088/-** |

Dr. Jayasudha J.S.                                                      Sri. Rejimoan R.

Professor in Computer Science & Dean (Academic)          Asst. Professor

                                                                    Dept. of Computer science

# Table of Contents

| Sl. No. | Contents |
|---------|----------|
| 1. | Course Objective |
| 2. | Course Outcome |
| 3. | Course Contents |
| 4. | Resource Persons |
| 5. | Participants |
| 6. | Programme Schedule |
| 7. | List of Coordinators & Technical assistants |
| 8. | Details of sessions handled by External Resource Persons |
| 9. | List of Distinguished Officials present in the programme during inauguration |
| 10. | Feedback/ Recommendations |
| 11. | Attendance of Participants |
| 12. | Audited Statement |
| 13. | Expenditure Details |
| 14. | Utilization Certificate |
| 15. | Summary |

1.  **COURSE OBJECTIVE**

The main objective of the course is to learn the tools and techniques used for data analytics and to promote the research in the area of data analytics.

2.  **COURSE OUTCOME**

At the end of this course, the participants should be able to formulate research problems related to data analytics and to identify the research challenges in data analytics.

3.  **COURSE CONTENTS**

Social network analysis focuses on the analysis of pattern of relationships among people, organizations, states and different social entities. The rapid growth of consumer data combined with the impact of social media has created a need to understand the meaningful data. Social network analysis has already been used in a number of areas, primarily focused on criminal activities. Analysis of Big data can lead to increase in sales, fraud detection, pattern recognition and risk prediction in various domains. Social network analysis can be used to detect patterns, establish linkages between individuals and to connect non-obvious relationships. The research works are being carried out in the area of finding the communities from multi-relational social network data for identifying criminals and to detect abnormal behaviors.

The tools and techniques used for analyzing the data posted in social networks are to be familiarized for analyzing the data. The different topics covered in this course includes Scope of Research in Data Analytics, Big Data Security, Research challenges in Data Analytics, Tools and Techniques used for analyzing Big Data, Probability, Plausibility measure, Possibility and necessity measure, Processing and Analysis of data with Hadoop, Spark, Storm Data Analytic tools and Programming using R language. Hands on training sessions were handled for familiarizing the usage of the tools for data analytics, analysis of data with Hadoop, Spark and storm and applications were demonstrated using R language.

4.  **RESOURCE PERSONS**

**External Faculty:**

1.  Dr. Madhu Kumar, Professor, Department of Computer Science, NIT Calicut
2.  Dr. Priya Chandran, Professor, Department of Computer Science, NIT Calicut
3.  Sri. Sreejith V., Technology Architect, TCS, Kochi
4.  Dr. Anu Mary Chacko, Assistant Professor, Department of Computer Science, NIT Calicut

5. Prof. Vysakh R., Research Scholar, Department of Computer Science, NIT Calicut and Asst. Professor, Department of Computer Science, RajaGiri Institute of Technology, Kakkanad

6. Sri. Brijesh Madhvan, CEO – Curvlogic, Technopark

7. Sri. Hiran Bose, Principal Engineer, CDAC, Technopark

8. Dr. Jiji C. V., Principal, College of Engineering, Trivandrum

9. Sri. Pankaj Kumar, Assistant Professor, Department of Computer Science, Federal Institute of Science and Technology, Angamali

**Internal Faculty for handling the lab sessions along with external faculty**

1. Dr. Jayasudha J. S.
   Professor in Computer Science and Dean (Academic),
   Sree Chitra Thirunal College of Engineering,
   Pappanamcode

2. Rejimoan R.,
   Asst. Professor,
   Department of Computer Science & Engineering
   Sree Chitra Thirunal College of Engineering,
   Pappanamcode

## 5. PARTICIPANTS

Total number of participants are 36 (External participants : 28 and internal participants : 8). External participants were working in different engineering colleges under the APJ Abdul Kalam Technological University Kerala. The participants are faculties from various engineering colleges under the APJ Abdul Kalam Technological University Kerala and other reputed Universities.

No. of External Participants : 28

No. of Internal Participants : 8

Total No. of Participants : 36

# 6. Programme Schedule

## RESEARCH CHALLENGES IN DATA ANALYTICS

(6th December to 13th December 2018)

| Date | 9.30 to 9.45 | 9.45 to 11.10 | | 11.20-11.45 | 11.45 to 1:00 | | 1.45-3.00 | | 3.10-5.15 |
|---|---|---|---|---|---|---|---|---|---|
| 6/12/18 Thursday | Registration | Introductory Talk on "Data Analytics" (Dr. Madhu Kumar, NIT) | Tea Break | Inaugural Address by (Dr. Shashi Tharoor M.P.) | Scope of Research (Dr. Madhu Kumar, NIT) | Lunch Break | Techniques used for Analyzing Big Data (TCS) | Tea Break | Research Challenges on Data Analytics (Dr. Priya Chandran, NIT) |
| 7/12/18 Friday | Tools for Big data Security (Prof. Anu Mary Chacko, NIT) | | Tea Break | Exploratory Data Analysis using R Language (Prof. Vysakh, NIT) | | Lunch Break | Hands on Session - R Language (Prof. Visakh, NIT) | Tea Break | Big data analytics using R (Prof. Visakh, NIT) |
| 10/12/18 Monday | Deep Neural Networks (Sri. Brijesh Madhavan, Curvlogic) | | Tea Break | Long short term memory (Sri. Brijesh Madhavan, Curvlogic) | | Lunch Break | Long short term memory (Sri. Brijesh Madhavan, Curvlogic) | Tea Break | Data analysis using cyber forensic tools (CDAC) |

| Date | | | | | |
|---|---|---|---|---|---|
| 12/12/18 Wednesday | Hands on session on Tools used for Data analysis (CDAC) | Hands on session on Tools used for Data analysis (CDAC) | Processing and Analysis of data using Hadoop (Sri. Pankaj Kumar, FISAT) | Hands on session : Analyzing data using Hadoop (Sri. Pankaj Kumar, FISAT) | |
| 13/12/18 Thursday | Probability and Plausibility Measure (Dr. Jiji, CET) | Possibility and Necessity Measure (Dr. Jiji, CET) | Processing of data using Spark (Sri. Pankaj Kumar FISAT) | Hands on session: data analysis using Spark (Sri. Pankaj Kumar FISAT) | Processing of data using Storm (Sri. Pankaj FISAT) | Valedictory ceremony |

# 7. List of Coordinators & Technical assistants

| | | |
|---|---|---|
| 1. | Centre Coordinator | **Dr. K. Prabhakaran Nair** |

The Principal
Sree Chitra Thirunal College of Engineering

2. Course Coordinator

**1. Dr. Jayasudha J.S.**
Professor, Dept. of Computer Science & Engineering
Sree Chitra Thirunal College of Engineering
Pappanamcode
Ph: 9495376533,8848991155, jayasudhajs@gmail.com

**2. Rejimoan R.**
Assistant Professor, Dept. of Computer Science & Engineering
Sree Chitra Thirunal College of Engineering
Pappanamcode
Ph : 9446459948,9496909948, rejimoan@gmail. com

3. Technical Assistants

1. Sri. Saji S.
Second Grade Instructor
Dept. of Computer Science & Engineering
Sree Chitra Thirunal College of Engineering
Pappanamcode

2. Harikumar S.
Second Grade Instructor
Dept. of Computer Science & Engineering
Sree Chitra Thirunal College of Engineering
Pappanamcode

3. Sri. Sen K.V
Trade Instructor
Dept. of Computer Science & Engineering
Sree Chitra Thirunal College of Engineering
Pappanamcode

4. Smt. Meena S. R.
Trade Instructor
Dept. of Computer Science & Engineering
Sree Chitra Thirunal College of Engineering
Pappanamcode

# 8. Details of sessions handled by External Resource Persons

1. Dr. Madhu Kumar, Professor, Department of Computer Science, NIT Calicut has handled introductory talk on "Data Analytics" from 9.45 to 11.10 am and handled session on "Scope of Research" from 11.45 am to 1 pm on 6th December 2018.

2. Sri. Sreejith V., Technological Architect, TCS, Kochi has handled session on "Techniques used for analyzing Big data" from 1.45 to 3 pm on 6th December, 2018.

3. Dr. Priya Chandran, Professor, Department of Computer Science, NIT Calicut has handled session on "Research Challenges on Data Analytics from 3.10 to 5.15 pm on 6th December 2018.

4. Dr. Anu Mary Chacko, Assistant Professor, Department of Computer Science, NIT Calicut has handled session on "Tools for Big Data Security" from 9.30 to 11.10 on 7th Dec 2018.

5. Prof. Vysakh R., Research Scholar, Department of Computer Science, NIT Calicut and Asst. Professor, Department of Computer Science, RajaGiri Institute of Technology, Kakkanad has handled session on "Exploratory Data Analysis using R Language from 11.20 to 1.00 and "Hands on session on R Language" from 1.45 to 3 and Big data analytic using R from 3.10 to 5.15 on 7th Dec 2018

6. Sri. Brijesh Madhvan, CEO – Curvlogic, Technopark has  handled session on "Deep Neural Networks" from 9.30 to 11.10 and " Long Short Term Memory" from 11.20 to 1.00 & from 1.45 to 3.00 on 10th Dec 2018

7. Sri. Hiran Bose, Principal Engineer, CDAC, Technopark has handled session on "Data Analysis using cyber forensic tools" from 3.10 to 5.15 on 10th Dec 2018 , "Hands on session on tools used for data analytics" from 9.30 to 11.10 &11.20 to 1.00  on 12th Dec 2018.

8. Dr. Jiji C. V., Principal, College of Engineering, Trivandrum has handled session on "Probability and Plausibility Measure" from 9.30 to 11.10 & 11.20 to 1.00 on 13th Dec 2018

9. Sri. Pankaj Kumar, Assistant Professor, Department of Computer Science, Federal Institute of Science and Technology, Angamali has handled session "Processing and analysis of data using Hadoop"from 1.45 to 3.00,"Hands on session :Analysing Data using Hadoop" from 3.10 to 5.15 on 12th Dec 2018,"Processing of Data using Spark" from 11.45 to 1.00,"Hands on session:data ananlysis using SPARK" from 1.45 to 3.00 and "Processing of Data using Storm" from 3.10 to 5.10 on 13th Dec 2018

# 9. List of Distinguished Officials of College present in the programme during inauguration

1. Dr. Shasi Tharoor M. P.
   Hon'ble Member of Parliament

2. Dr. Prabhakaran Nair,
   The Principal
   Sree Chitra Thirunal College of Engineering

3. Prof. SarathChandradas
   PG Dean
   Sree Chitra Thirunal College of Engineering

4. Dr. Geetha Kumari B.,
   Dean (Planning and Development)
   Sree Chitra Thirunal College of Engineering

5. Dr. Mohan G.
   Head of the Department
   Dept of ME, Sree Chitra Thirunal College of Engineering

6. Dr. Subu Surendran
   Head of the Department
   Dept of CSE, Sree Chitra Thirunal College of Engineering

7. Dr. Jaya J.B.
   Head of the Department
   Dept of Applied Sciences, Sree Chitra Thirunal College of Engineering

8. Dr. Libish T. M.
   Head of the Department
   Dept of ECE, Sree Chitra Thirunal College of Engineering

9. Dr. Sheeja M K
   Professor
   Dept of ECE
   Sree Chitra Thirunal College of Engineering

10. Dr. Soniya B
    Professor
    Dept of CSE
    Sree Chitra Thirunal College of Engineering

11. Dr. Ajith R
    Dean (Student affairs)
    Dept. of ME
    Sree Chitra Thirunal College of Engineering

# Feedback/ Recommendations

Short term Course on
## "Research Challenges in Data Analytics"
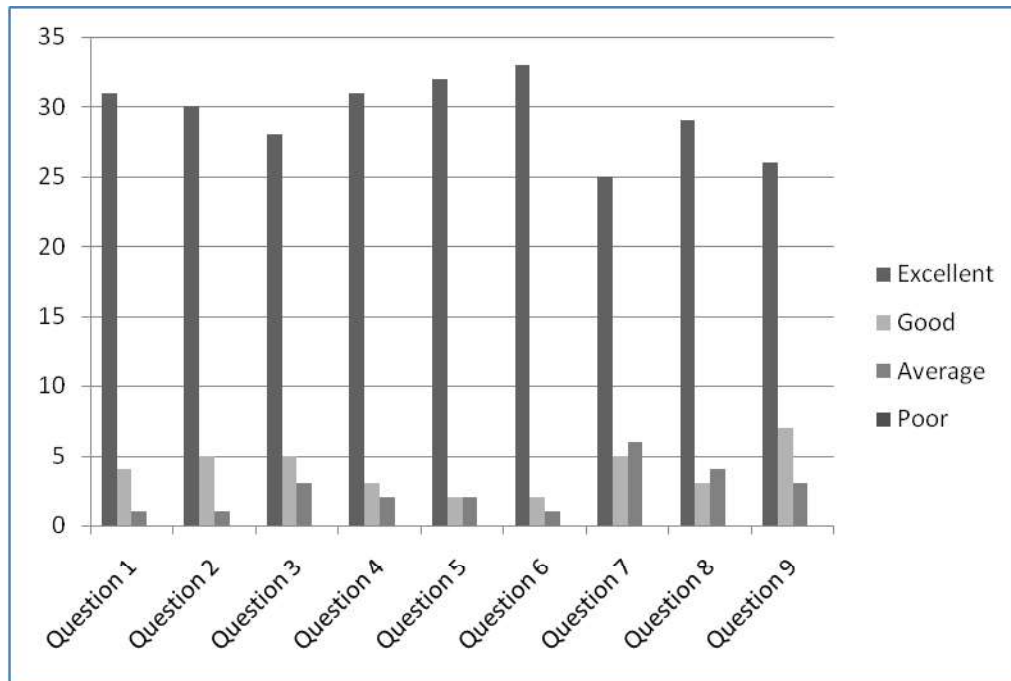6th to 13th December, 2018



Organized by
**Department of Computer Science and Engineering**
**Sree ChitraThirunal College of Engineering Pappanamcode, Thiruvananthapuram**

|  | Poor | Average | Good | Excellent/ Useful |
|---|---|---|---|---|
| 1. The objectives of the training were clearly defined | 1 | 2 | 3 | 4 |
| 2. The topics covered were relevant | 1 | 2 | 3 | 4 |
| 3. The content was organized and easy to follow | 1 | 2 | 3 | 4 |
| 4. Questionnaire and interactions were encouraged | 1 | 2 | 3 | 4 |
| 5. The Resource Persons were knowledgeable about the training topics | 1 | 2 | 3 | 4 |
| 6. The training objectives were met | 1 | 2 | 3 | 4 |
| 7. Venue was adequate and comfortable | 1 | 2 | 3 | 4 |
| 8. Quality of Food | 1 | 2 | 3 | 4 |
| 9. Accommodation | 1 | 2 | 3 | 4 |

**Suggestions for improvement:**

**Do you have any suggestions for including new sessions in such courses?**

13

# FEEDBACK STATISTICS



# Recommendations & Suggestions given by participants

- The programme was excellent with good resource persons
- This programme was very useful and informative, similar such programmes are to be organized for including more tools used for analyzing big data.
- Include more hands-on sessions
- Try to pre-load software before starting the lab sessions
- Efficient time management is required

# UTILIZATION CERTIFICATE

Certified that out of Rs. 1,70,000/- sanctioned by APJ Abdul Kalam Technological University towards financial assistance for the Short Term Course on "Research Challenges in Data Analytics" organized by Department of Computer Science and Engineering, an amount Rs**. 1,54,088/-(One lakh  fifty four thousand and eighty eight only)** was utilized for the purpose for which it was sanctioned, as shown in the Statement of Expenditure annexed.

Name and Signature of

Co-ordinator

Name and Signature of
Head of the Institution

Name and Signature of
Accounts Officer/Chartered
Accountant

**Office Seal**

**SHORT TERM COURSE ON "REASEARCH CHALLENGES IN DATA ANALYTICS"**

**FROM 6TH TO 13TH DECEMBER 2108**

# STATEMENT OF EXPENDITURE

The expenditure of the course is as given in the table. The detailed bills/ vouchers and other supporting documents are attached. The total expenditure is **Rs.1,54,088/- (One lakh fifty four thousand and eighty eight only)**.

| No | Item | Amount |
|---|---|---|
| 1 | Honorarium to faculty/ External experts | Rs. 40,000/- |
| 2 | TA to external experts | Rs.1 3830/- |
| | Local Conveyance to External experts | Rs.1900/- |
| 3 | Accommodation to external experts | Rs 1920/ |
| 4 | Honorarium to centre coordinator | Rs.7,500/- |
| 5 | Honorarium to course coordinator | Rs.7,500/- |
| 6 | Honorarium to technical assistants for venue arrangement, purchase assistance, data entry etc. (Please specify the number of persons employed for these activities) | Rs 10,000/- (4 persons) |
| 7 | Cost of training material (Soft Copy / Hard copy / text book etc, Please specify the cost per participant) | Rs 4,100/- |
| 8 | Cost of stationeries, consumables, certificate printing, report printing, photography etc. | Rs.14,338/- |
| 9 | Food & refreshments to external experts / Guests | Rs. 5,194 |
| 10 | Food & refreshments to participants | Rs. 45756 |
| 11 | Any other items (Please specify) | Nil |
| 12 | Miscellaneous | Rs.2,050/- |
| | TOTAL | **Rs.1,54,088/-** |

# Item wise Expenditure Statement (1,2)

### Remuneration, Travelling Expenses & DA

| No | Name | Date & Session | Remuneration | Travelling Expenses/Local Conveyances |
|---|---|---|---|---|
| 1 | Dr. MadhuKumar | 06/12/2018 FN | Rs 5000/- | **Rs.2590/-** |
| 2 | Dr. Priya Chandran | 06/12/2018 AN | Rs 5000/- | **Rs.2590/-** |
| 3 | Dr. Anu Mary Chacko | 07/12/2018 FN(9.30 to 11.10) | Rs 5000/- | **Rs.3500/-** |
| 4 | Mr Visakh R | 07/12/2018 FN(11.20 to 1.00 & 1.45 to 5.15) | Rs 5000/- | **Rs.3500/-** |
| 5 | Dr Brijesh Madhavan | 10/12/2018 FN ) &AN(1.45 to 3.00) | Rs 5000/- | **Rs.1000/-** |
| 6 | Mr Hiron Bose | 10/12/2018 AN(3.10 to 5.15) &12/12/18 FN | Rs 5000/- | **Rs.900/-** |
| 7 | Mr Pankaj Kumar | 12/12/18 AN 13/12/18 FN(11.45 to 1.00) &AN | Rs 7000/- | **Rs.1650/-** |
| 8 | Dr. Jiji C V | 13/12/18 FN(9.30 to 11.10) | Rs 3000/- | |
| 9 | Sri. Sreejith V. | 06/12/2018 AN | Not accepted remuneration | |
| | | **Total Amount** | **Rs. 40,000/-** | **Rs.15,730/-** |
| | | **Total Expenses to resource persons as Remuneration & Travel Expenses** | | **Rs 55,730/-** |

The vouchers showing the remuneration, travelling Expenses and taxi fares are attached. The Honorarium to faculty/ External experts is Rs 5000/- for faculties from NIT or IIT and it is limited to Rs 1000/hour for other faculties or experts. The local conveyance to resource persons is limited to less than Rs 1000/ day depending on the distance.

# Item wise Expenditure Statement (3)

## Accommodation to External Experts

| No | Name | Date | Name | Accommodation Expenses |
|----|------|------|------|------------------------|
| 1 | Dr. MadhuKumar | 06/12/2018-7/12/18 | Kerala Government Guest House | **Rs 920/** |
| 2 | Mr Pankaj Kumar | 13/12/18 | BSNL RTT | **Rs 1000/** |
| | | **Total Amount** | | **Rs.1920/-** |

# Item wise Expenditure Statement (4,5)

## Honorarium to centre coordinator & Course Co-ordinators

| No | Name | Amount |
|----|------|--------|
| 1 | Dr. K Prabhakarn Nair, Principal, SCTCE | Rs 7500/- |
| 2 | Dr Jayasudha J S, Professor and Dean (Academic), SCTCE | Rs 7500/- |
| | **Total Amount** | **Rs 15000/-** |

As per KTU norms, Honorarium to centre coordinator and course coordinator is Rs.3000/ day which have to be shared between them. For the five day course the amount is Rs 15,000/- which is equally shared by centre coordinator & one of the Course Co-ordinator.

# Item wise Expenditure Statement (6)

**Honorarium to technical assistants for venue arrangement, purchase assistance, data entry etc.**

| No | Name | Amount |
|----|------|--------|
| 1 | Saji S. | Rs. 2500/- |
| 2 | Sen K V | Rs. 2500/- |
| 3 | Meena S R | Rs. 2500/- |
| 4 | Harikumar S | Rs. 2500/- |
| | **Total Amount** | **Rs.10000/-** |

As per KTU norms the honorarium to technical assistants for venue arrangements, purchase assistance, data entry etc. is limited to Rs 2000/day, applicable during the duration of the programme. The classes were also handled in laboratories for providing hands-on sessions. The support of technical assistants were required during the hands-on sessions in addition to the assistants of venue arrangements, purchase assistance, data entry etc.

# Item wise Expenditure Statement (7)

| No | Item (Cost of training material) | Name of the shop | Bill No | Date | Amount |
|---|---|---|---|---|---|
| **1** | Course Materials | Whiteness | 4775 | 12/12/18 | Rs. 1,500/- |
| | Course Materials | Whiteness | 4644 | 05/12/18 | Rs. 2,000/- |
| **2** | Softcopy of material course in DVD to 35 students | New Harisree Book Centre | 379 | 13/12/18 | Rs 600/- |
| | | | | **Total Amount** | **Rs.4,100/-** |
| Even though KTU suggests Rs. 1000/- per participant, an amount of Rs.114 /- is only spent for participant. The DVD contains the copy of free open source text books in Data Analytics, R Language etc. and the PowerPoint presentations of all resource persons. | | | | | |

# Item wise Expenditure Statement (8)

**Cost of stationeries, consumables, certificate printing, report printing, photography etc.**

| No | Items | Name of the shop | Bill No | Date | Amount |
|---|---|---|---|---|---|
| 1 | Brochure Printing | Print Home Offset Printers | 085 | 09/11/2018 | 1800 |
| 2 | Printing of Certificates, report binding, Photostats & photography | Babas The complete Iphoto studio | 603 | 12/12/2018 | 770 |
| | | Revathy Digital studio | 2939 | 13/12/2018 | 400 |
| | | Revathy Digital studio | 2949 | 18/12/2018 | 390 |
| 3 | Stationeries | New Harisree Book Centre | 135 | 25/10/2018 | 357 |
| | | New Harisree Book Centre | 281 | 9/11/2018 | 400 |
| | | PC Book House | 1 | 04/12/2018 | 390 |
| | | Devi note books and stationery | D43580 | 4/12/2018 | 6867 |
| | | New Harisree Book Centre | 754 | 5/12/2018 | 500 |
| | | | | | |
| 4 | Flex Printing | Print Home Offset Printers | 194 | 5/12/2018 | 2240 |
| 5 | ID card printing | Arsha offset and Graphics | 083 | 3/12/2018 | 224 |
| | | | | **Total Amount** | Rs.14,338/- |

# Item wise Expenditure Statement (9,10)

**Food & refreshments to external experts / Guests and participants**

| No | Item | Name of the Shop | Bill No | Date | Amount |
|---|---|---|---|---|---|
| 1 | Food to External Experts | Guest House KTDC | 43228 | 7/12/18 | 340 |
| | | Gauri Marketting Agency | 6951 | 7/12/2018 | 240 |
| | | Hotel White Dammar | 1184,1181,11,26 | 6/12/18 | 1314 |
| | | SCTCE Canteen | 909 | 13/12/2018 | 3300 |
| 2 | Food and refreshment to Participants | SCTCE Canteen | 265 | 13/12/18 | 6700 |
| | | SCTCE Canteen | 910 | 13/12/2018 | 7200 |
| | | Oru kutti kattan kada | 56,101 | 7/12/18 | 240 |
| | | Oru kutti kattan kada | 56,101 | 2/12/18 | 240 |
| | | Royal Caterers | 002 | 7/12/18 | 6900 |
| | | Royal Caterers | 003 | 10/12/18 | 6900 |
| | | Royal Caterers | 004 | 12/12/18 | 6900 |
| | | Royal Caterers | 0025 | 13/12/18 | 10676 |
| | | | | **Total Amount** | **Rs.50,950/-** |

.

## Item wise Expenditure Statement (12)

### Miscellaneous

| No | Name | | Bill No | Date | Amount |
|---|---|---|---|---|---|
| 1 | Auditor | | | | Rs.590/- |
| 2 | Postages | Post Office, Pappanamcode | Letter counter signed by Post master | 9/11/2018 | Rs.300/- |
| 3 | Inauguration function items | Sree Padmanabha Sree Lekshmi Flowers | 282 | 6/12/2018 | Rs. 660 |
| | | J.R. Sounds | 762 | 6/12/2018 | Rs. 500 |
| | | | | **Total Amount** | **Rs.2050 /-** |

1. The account has been audited by a charted account and an amount of Rs. 590/- has been paid as the auditing fee.
2. Traditional lamp lighting inauguration function was done on the first day. Expenditure for that function is Rs1160/-

## 15. Summary

The department of Computer Science and Engineering of Sree Chitra Thirunal College of Engineering had conducted a short term course on "Research challenges in Data Analytics" from 6th to 13th December 2018, sponsored by APJ Abdul Kalam Technological University and approved by Directorate of Technical Education, Kerala. Total number of participants are 36 (External participants : 28 and internal participants : 8). External participants were working in different engineering colleges under the APJ Abdul Kalam Technological University Kerala. The participants are faculties from various engineering colleges under the APJ Abdul Kalam Technological University Kerala and other reputed Universities.

The workshop was formally inaugurated by Hon'ble Member of Parliament Dr. Shasi Tharoor M. P., with a key note address on "Research Challenges on Big Data Security". The participants were inspired by his motivational talk. The key attraction of the course was the hands on session on Analysis of data using Spark and Storm.

We had conducted the course successfully and the total expenditure is 154198 (One lakh fifty four thousand one hundred and ninety eight). This amount was spent by the college with the assumption that KTU will reimburse the amount to the college.

## Submitted

The Department of Computer Science and Engineering of Sree Chitra Thirunal College of Engineering had conducted Short Term Course on "Research Challenges in Data Analytics", sponsored by APJ Abdul Kalam Technological University and approved by Directorate of Technical Education from 6$^{th}$ to 13$^{th}$ December 2018. The expenditure for the course is given in the table. The detailed bills/ vouchers and other supporting documents are attached. The total expenditure is **Rs.1,54,088/- (One lakh fifty four thousand and eighty eight only)**. Please take necessary steps to forward the attached documents to KTU for refunding the amount and credit it to the Account No: 67066395303, Account name: NTIT SCTCE, Branch Name: State Bank of India, SCT Engineering College Branch, IFSC Code:SBIN0070851.

| No | Item | Amount |
|----|------|--------|
| 1 | Honorarium to faculty/ External experts | Rs. 40,000 |
| 2 | TA to external experts | Rs.13830 |
|   | Local Conveyance to External experts | Rs.1900 |
| 3 | Accommodation to external experts | Rs 1920 |
| 4 | Honorarium to centre coordinator | Rs.7,500 |
| 5 | Honorarium to course coordinator | Rs.7,500 |
| 6 | Honorarium to technical assistants for venue arrangement, purchase assistance, data entry etc. (Please specify the number of persons employed for these activities) | Rs 10,000 (4 persons) |
| 7 | Cost of training material (Soft Copy / Hard copy / text book etc, Please specify the cost per participant) | Rs 4,100 |
| 8 | Cost of stationeries, consumables, certificate printing, report printing, photography etc. | Rs.14,338 |
| 9 | Food & refreshments to external experts / Guests | Rs. 5,194 |
| 10 | Food & refreshments to participants | Rs. 45756 |
| 11 | Any other items (Please specify) | Nil |
| 12 | Miscellaneous | Rs.2,050 |
|   | TOTAL | **Rs.1,54,088/-** |

Dr. Jayasudha J.S.                                                                                            Sri. Rejimoan R.

Professor in Computer Science & Dean (Academic)                          Asst. Professor

Dept. of Computer science

**Short Term course on "Research Challenges in Data Analytics" from 6th to 13th December 2018**
**STATEMENT OF EXPENDITURE**

| Item | Particulars | Date | Details | Bill No | Amount | Total Bill Amount | Sanctioned amount | Remarks |
|---|---|---|---|---|---|---|---|---|
| | | | | Payment VoucherNo.1 | 5000 | | | |
| | | | | Payment VoucherNo.2 | 5000 | | | |
| | | | | Payment VoucherNo.3 | 5000 | | | Sessions |
| | | | | Payment VoucherNo.4 | 5000 | | | were handled |
| | | | | Payment VoucherNo.5 | 5000 | | | by more |
| | | | | Payment VoucherNo.6 | 2000 | | | faculties |
| | | | Vouchers signed | Payment VoucherNo.7 | 3000 | | | from NIT |
| | | | Vr No. | Payment VoucherNo.8 | 3000 | | | Calicut |
| | Honorarium to | 06/12/18 to | 1,2,3,4,5,6,7, | Payment VoucherNo.9 | 3000 | | | |
| 1 | faculty/External Experts | 13/12/19 | 8,9,10 | Payment VoucherNo.10 | 4000 | 40000 | 30000 | |
| | | | | | 2590 | | | Second or third AC |
| | | | | | 2590 | | | Train Fare |
| | | | | | 3500 | | | were given to |
| | | 6/12/18 to | | | 3500 | | | faculties from |
| | TA to External Experts | 13/12/18 | TA bill signed | TA Bill | 1650 | 13830 | 6000 | outsation |
| | Local Conveyance To | 12/10/2018 | Receipts Signed | 58 | 1000 | | | |
| 2 | External Experts | 12/12/2018 | Receipts Signed | 57 | 900 | 1900 | 5000 | |
| | | 6/12/18, | Kerala Governmet Guest | | | | | |
| | Accomadation to External | 7/12/18 | House cash bill | 58 | 920 | | | |
| 3 | Experts | 12/13/2018 | BSNL Receipt | 620 | 1000 | 1920 | 3000 | |
| | Honorarium to central | | Vouchers signed | | | | | |
| 4 | coordinator | 12/13/2018 | Vr No:11 | 4 | 7500 | 7500 | 7500 | |

| Item | Particulars | Date | Details | Bill No | Amount | Total Bill Amount | Sanctioned amount | Remarks |
|---|---|---|---|---|---|---|---|---|
| 5 | Honorarium to course coordinator | 12/13/2018 | Vouchers signed Vr No:12 | Payment VoucherNo.11 | 7500 | 7500 | 7500 | |
| 6 | Honorarium to Technical Assistants | 12/13/2018 | Vouchers signed Vr No:13,14,15,16 | Payment VoucherNo.12 | 2500 | 10000 | 10000 | |
| | | 12/13/2018 | | Payment VoucherNo.13 | 2500 | | | |
| | | 12/13/2018 | | Payment VoucherNo.14 | 2500 | | | |
| | | 12/13/2018 | | Payment VoucherNo.15 | 2500 | | | |
| 7 | Cost of training Material | 12/5/2018 | Whiteness | 4644 | 2000 | 4100 | 30000 | |
| | | 12/12/2018 | Whiteness | 4775 | 1500 | | | |
| | | 12/3/2018 | New Harisree Book Centre | 379 | 600 | | | |
| | | 11/9/2018 | Print Home Offset Printers | 85 | 1800 | | | |
| | | 12/12/2018 | Babas The complete Iphoto studio | 603 | 770 | | | |
| | | 12/13/2018 | Revathy Digital studio | 2939 | 400 | | | |
| | | 12/18/2018 | Revathy Digital studio | 2949 | 390 | | | |
| | | 10/25/2018 | New Harisree Book Centre | 135 | 357 | | | |
| | | 11/9/2018 | New Harisree Book Centre | 281 | 400 | | | |
| | | 12/6/2018 | PC Book House | 1 | 390 | | | |
| | | 12/4/2018 | Devi note books and stationery | D43580 | 6867 | | | |
| | | 12/5/2018 | New Harisree Book Centre | 754 | 500 | | | |

| Item | Particulars | Date | Details | Bill No | Amount | Total Bill Amount | Sanctioned amount | Remarks |
|---|---|---|---|---|---|---|---|---|
| 8 | Cost of Stationaries | 12/5/2018 | Print Home Offset Printers | 194 | 2240 | 14338 | 15000 | |
| | | 12/3/2018 | Arsha offset and Graphics | 83 | 224 | | | |
| 9 | Food and Refreshment to external experts | 12/7/2018 | Guest House KTDC | 43228 | 340 | 5194 | 12500 | |
| | | 12/7/2018 | Gauri Marketting Agency | 6951 | 240 | | | |
| | | 12/6/2018 | Hotel White Dammar | 11,844 | 1314 | | | |
| | | 12/13/2018 | SCTCE Canteen | 909 | 3300 | | | |
| 10 | Food and refreshment to Participants | 12/6/2018 | SCTCE Canteen | 910 | 7200 | 45756 | 37500 | 36 participants attended the course instead of 30 participants |
| | | 12/13/2018 | SCTCE Canteen | 265 | 6700 | | | |
| | | 12/7/2018 | Oru kutti kattan kada | 56,101 | 240 | | | |
| | | 12/12/2018 | Oru kutti kattan kada | 56,101 | 240 | | | |
| | | 12/7/2018 | Royal Caterers | 2 | 6900 | | | |
| | | 12/10/2018 | Royal Caterers | 3 | 6900 | | | |
| | | 12/12/2018 | Royal Caterers | 4 | 6900 | | | |
| | | 12/13/2018 | Royal Caterers | 25 | 10676 | | | |
| 11 | Any other items(Please Specify) | | Nil | | | 0 | | |
| | | | Auditor | | 590 | | | |
| | | 11/9/2018 | Post Office, Pappanamcode | Letter counter signed by Post master | 300 | | | |
| | | 12/6/2018 | Sree Padmanabha Lekshmi Flowers | 282 | 660 | | | |

| Item | Particulars | Date | Details | Bill No | Amount | Total Bill Amount | Sanctioned amount | Remarks |
|------|-------------|------|---------|---------|--------|-------------------|-------------------|---------|
| 12 | Miscellaneous | 12/6/2018 | J.R. Sounds | 762 | 500 | 2050 | 6000 | |

**Total Amount**     **154088**

(One Lakh fifty four thousand  and eighty eight)

# Disbursing of Remuneration for conducting short term course on "Research Challenges in Data Analytics" conducted during 6-12-2018 to 13-12-2008

| Sl.No. | Name | Designation | Purpose | Amount | Receiver's Signature |
|---|---|---|---|---|---|
| 1. | Dr. K. Prabhakaran Nair | Principal | Remuneration to centre coordinator | Rs.7500 | |
| 2. | Dr. Jayasudha J.S. | Professor & Dean(Academic) | Remuneration to Course Coordiator | Rs.7500 | |
| 3. | Rejimoan R. | Asst. Professor | Remuneration to Course Coordiator | Rs.7500 | |
| 4. | Harikumar S. | Instructor Grade II | Remuneration to Laboratory staff | Rs.2500 | |
| 5. | Saji G. | Instructor Grade II | Remuneration to Laboratory staff | Rs.2500 | |
| 6. | Meena S.R. | Trade Instructor | Remuneration to Laboratory staff | Rs.2500 | |
| 7. | Sen K.V. | Trade Instructor | Remuneration to Laboratory staff | Rs.2500 | |