Annexure 5.7.4



K.S. INSTITUTE OF TECHNOLOGY DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

CONSULTANCY

The ECE department has an R & D Centre affiliated by Visveswaraya Technological University (VTU). Faculty members of the department are collaborating with organizations like Tata elxsi, Mitara consulting services, Acsia Technologies (P) Ltd., and many more for consultancy works. The **research and consultancy projects** worth **Rs. 54.42 Lakhs** are either completed or ongoing. Following are the consultancywork details by the department faculty:

| Academic | Name of the | Title of Work | Duration | Company | Amount |
|----------|-----------------------|--|--|-----------------------------------|-------------|
| Year | Faculty | | | | |
| 2021-22 | Dr.Joy Prabhakaran | Sony liv player | 7 months (From 15 th August 2021-14 th Feb 2022) | Tata Elxsi | 31,32,000/- |
| 2020-21 | Dr.Joy Prabhakaran | Sony liv player | 6 months (from 15 th Feb 2021- June2021) | Tata Elxsi | 16,35,000/- |
| 2019-20 | Dr.Joy Prabhakaran | Scope of service to co-ordinate the skill enhancing initiatives | 5 months (16 th August 2019-14 th Jan 2020) | Acsia Technologies (P) Ltd. | 4,75,000/- |
| 2018-19 | Dr.Joy Prabhakaran | Scope of service to co-ordinate the skill enhancing initiatives | 3 months (March 2019- May2019) | Acsia Technologies (P) Ltd | 1,50,000/- |
| | Dr.Joy Prabhakaran | Mitara consulting services for subject matter expert (SME) | 3 months (Jan 2019- March 2019) | Mitara consulting services | 50,000/- |
| | | | | Total | 54,42,000/- |

DESCRIPTION OF CONSULTANCY WORKS

| Title of | Video Technology&Sony liv player | | | | | |
|-------------|---|--|--|--|--|--|
| Work | | | | | | |
| Company | Tata Elxsi | | | | | |
| Description | Total Contract Amount: Rs. 48 Lakhs | | | | | |
| | Engagement Period: 15 Feb 2021 to 14 Feb 2022 | | | | | |
| | Providing video technology related analysis and identify avenues to improve the video | | | | | |
| | viewer's QoE (quality of experience). The QoE focus is on the following: | | | | | |
| | a. Video Start Time | | | | | |
| | b. Rebuffering ratio | | | | | |
| | c. Video Play Failures | | | | | |
| | d. Device stalls | | | | | |
| | To improve these parameters, telemetry data (primarily from Conviva) is analysed, | | | | | |
| | and appropriate actions derived. The analysis is done manually and using AI | | | | | |
| | techniques. Al is used primarily to cluster different events and find actions that can be | | | | | |
| | derived.This work is from Tata Elxsi's OTT customers like SonyLiv, Zee, Discovery, SKY | | | | | |
| | and NBCU. The work includes consulting with the Competency Development group and | | | | | |
| | L&D at Tata Elxsi and design of Bootcamps and Workshops which covers the following | | | | | |
| | content: | | | | | |
| | a. KPI (Key Performance Indicators) measurement and improvement | | | | | |
| | b. Writing better code | | | | | |

| Title of | Scope of service to co-ordinate the skill enhancing initiatives | | | | |
|-------------|--|--|--|--|--|
| Work | | | | | |
| Company | Acsia Technologies (P) Ltd. | | | | |
| Description | Total Contract Amount: Rs. 6.25 Lakhs | | | | |
| | Engagement Period: 1 Feb 2019 to 31 Jan 2020. | | | | |
| | Guidance in code optimization and Research in Autonomous Driving area. | | | | |
| | The code optimization was mainly for the embedded code that Acsia develops for | | | | |
| | different applications running on automobiles. The segment involved was primarily | | | | |
| | cars and trucks. Most applications were to do with in-vehicle entertainment systems. | | | | |
| | Since there are various demands on the processing power and communication | | | | |
| | bandwidth on the systems available onboard, optimizing the code is a big | | | | |
| | requirement. Support was extended to the following optimizations: | | | | |
| | e. Algorithm level optimization | | | | |
| | f. Code optimization | | | | |
| | g. Hardware specific optimization | | | | |
| | Acsia initiated some R&D in Autonomous Driving and I supported this. The work | | | | |
| | initiated was in the following areas. | | | | |
| | a. Driver alertness | | | | |
| | b. Lane detection | | | | |

| Title of | Subject Matter Expert (SME) | | | |
|-------------|---|--|--|--|
| Work | | | | |
| Company | Mitara consulting services | | | |
| Description | Total Contract Amount: Rs. 50,000/- | | | |
| | Engagement Period: 1 Jan 2019 to 5 Mar 2021. | | | |
| | Conduct training programs for IT professionals in coding optimization area. The | | | |
| | training was conducted as a series of workshops. The workshops involved the | | | |
| | following::Logic design, Code improvement, Team based solutioning | | | |

PAYMENT DETAILS

| 2018-19 | Sl.No. | Date of Transaction | Transaction ID | Amount Received |
|---------|--------|---------------------|---------------------|-----------------|
| Mitara | 1 | 31/01/2019 | IMPS-903114121234 | 15,000/- |
| | 2 | 04/03/2019 | IMPS-63190765308508 | 35,000/- |
| | | | Total | 50,000/- |

| 2018-19 | SI.No. | Date of Transaction | Transaction ID | Amount Received |
|-----------------------|--------|---------------------|---------------------|-----------------|
| Acsia | 1 | 12/3/19 | NO73190774962013 | 50,000/- |
| Technologies (P) Ltd. | 2 | 22/4/19 | N113190807612126 | 50,000/- |
| (P) Lla. | 3 | 15/5/19 | IFT/0115051917935/3 | 50,000/- |
| | | | Total | 1,50,000/- |

| 2019-20 | SI.No. | Date of Transaction | Transaction ID | Amount Received |
|--------------|--------|---------------------|------------------|-----------------|
| Acsia | 1 | 16/08/19 | N228190903637479 | 1,25,000/- |
| Technologies | 2 | 19/09/19 | N228190903637479 | 1,00,000/- |
| (P) Ltd. | 3 | 31/10/19 | N304190968449212 | 1,00,000/- |
| | 4 | 10/12/19 | N344191004534512 | 50,000/- |
| | 5 | 14/01/20 | N014201035890297 | 1,00,000/- |
| Total | | | 4,75,000/- | |

| 2020-21 To Till Date | SI.No. | Date of Transaction | Transaction ID | Amount Received after TDS Deduction by |
|-------------------------|--------|---------------------|------------------|--|
| 10 m bate | | | | Source |
| TATA ELXSI | 1 | 26/02/21 | CITIN21132329762 | 1,85,000/- |
| | 2 | 31/03/21 | CITIN21149598967 | 3,70,000/- |
| | 3 | 30/04/21 | CITIN21165595739 | 3,60,000/- |
| | 4 | 31/05/21 | CITIN21180448515 | 3,60,000/- |
| | 5 | 30/06/21 | CITIN21196001406 | 3,60,000/- |
| | 6 | 30/07/21 | CITIN21211597346 | 3,60,000/- |
| | 7 | 31/08/21 | CITIN21228744661 | 3,96,000/- |
| | 8 | 30/09/21 | CITIN21246013982 | 4,32,000/- |
| | 9 | 29/10/21 | CITIN21262634572 | 4,32,000/- |
| | 10 | 30/11/21 | CITIN21279600392 | 4,32,000/- |
| | 11 | 31/12/21 | CITIN21297725370 | 4,32,000/- |
| | 12 | 31/01/22 | CITIN22215594560 | 4,32,000/- |
| | 13 | 09/03/22 | CITIN22238225084 | 2,16,000/- |
| | • | | Total | 47,67,000/- |