Aryabhatta College

Department of Computer Science

(Annual Report for the Academic session 2016 to 2017)

1) Name of Teacher in Charge : Ms. Priti Jagwani

2) Brief details of Faculty members

Mr. Ranjan Kumar, Assistant Professor
Mr. Ranjan Kumar is Associate Professor at Department of computer science since September 2005. He did his MCA from Department of Computer Science, University of Delhi and Ph.D. from M.U., Bodhgaya. He has worked as Teacher-in-charge in Computer Science Department from 2005 to 2015. His area of interest are Theory of Computation, Data Science, Machine Learning, and Database. He has presented may papers in various National and International conferences. He has also published many research papers in reputed journals. He has also contributed as convener or member in various committees of the college such as Building Committee, PF Committee, Workload Committee, Website Committee, Academic Planning Committee, Research Publication and Extension Committee, etc.

Ms. Priti Jagwani , Assistant Professor
Ms. Priti Jagwani is an alumni of IIT Delhi. She has received her MTech and Ph.D. from IIT Delhi. Currently she is serving as assistant professor in dept. of computer science, Aryabhatta College, University of Delhi. She has served the academia for more than 15 years. She has published many papers with Springer, IEEE and Inderscience publishers. She is also working as a reviewer for many conferences of repute and presented her research papers in international conferences at Japan and China. She is the recipient of prestigious Top 50 Women in Education Leaders award (2019) by World Education Congress. She has been associated with National Council for Promotion of Sindhi Language (NCPSL) as Computer Expert. Under this initiative she has delivered many talks for enrichment of Sindhi Language. She has also delivered more than 100 lectures for CEC through VYAS channel since 2019.

Ms. Sonal Linda, Assistant Professor
Ms. Sonal Linda is Assistant Professor at Department of computer science since October 2015. She served as TIC, Computer Science Department during 2017-2018 and 2019-2020. She did her B.Sc. in Computer Science from St. Xavier's College Ranchi, Jharkhand. She did her MCA, M. Tech and Ph.D. in Computer Science from Jawaharlal Nehru University, New Delhi. She served in various committees and has 6 years of experience in teaching and research. She has published 2 SCIE indexed International Journals research papers. She has presented and published 3

International Conferences research papers. She has received best paper award in an International Conference. Her areas of interest are Artificial Intelligence, Machine Learning, Data Mining, Database Management System.

Mr. Gagandeep Sharma, Assistant Professor (Adhoc)

Mr. Gagandeep Sharma was Assistant Professor (Adhoc) in Department of computer science, Aryabhatta College (University of Delhi). He did his BCA in 2006 and MCA in 2009 from University of Jammu. He worked as Teaching Assistant in Computer Science Department, Bhadarwah campus, University of Jammu from 10 August 2011 to 20 February 2013. He worked as Lecturer at J.K college of Bachelor of Computer Applications, Kunjwani, Jammu from 02 August 2010 to 25 June 2011. He worked as Lecturer in Computer Science, Sacred Heart College of Management Technology from 27 October 2009 to 30 April 2010.

Ms. Mona Adlakha , Assistant Professor(Adhoc)

Ms. Mona Adlakha is currently serving as an Assistant Professor in the Department of Computer Science, Aryabhatta College (University of Delhi) since July 2016. She graduated from St. Stephen's College (Univ. of Delhi) in 1995 with a B.Sc. (Hons) in Physics. In 1998 she completed her Masters in Computer Applications (M.C.A.) from Kurukshetra University and started her career in the software industry. At Aithent Technologies Pvt. Ltd (erstwhile Software Services International Pvt. Ltd.) she worked in various projects in the banking & finance, insurance, healthcare and business solutions. In August 2002 she joined as Lecturer at Kalinda College (University of Delhi) to contribute to academia. Later she joined as Assistant Professor at Ram Lal Anand College (University of Delhi) and served there from August 2006 to September 2013. During this time, she completed her M.Phil. form Madurai Kamraj University in May 2009. She joined Maitreyi College (University of Delhi) from July 2014 to August 2015. She has also served as a Guest faculty for undergraduate and post graduate students in few colleges of University of Delhi.In the past 18+ years she has taught various papers in computer science to undergraduate and post graduate students. She has authored chapters for IGI Global (USA) & CBSE and lessons for Institute of Life Long Learning (ILLL), University of Delhi. Her areas of interest include database management systems, software engineering, machine learning and information security. At Aryabhatta College she has been actively involved in the functioning of the Website Committee and NAAC Committee, among others. As Convener/ Co-Convener of TechPioneers (Computer Science Society) she has been instrumental in building the foundation of the society. Ms Adlakha is an important member and key resource person in the newly formed Training Team at Aryabhatta College. She is a Certified Digital Teacher by ICT Academy.

Ms. Ruchika Aggarwal , Assistant Professor(Adhoc)

She was an Assistant Professor at Department of computer science since July 2016. She did B.SC.(Hons) Computer Science from DU in 2010 and MCA from GGSIPU in 2013. Worked as Project Officer in Common-Wealth Games Organisation. Worked as Software Engineer in NIIT Technologies Ltd. Her areas of interest were Software Engineering (Test data generation), Data Mining, Knowledge Discovery using Classification.

3) Student Strength

First Year	Second Year	Third Year
41	NA	NA

4) Details of publication work by the faculty members

Mr. Ranjan Kumar, Assistant Professor

- Presented a research paper titled 'Leveraging Free and Open Source Software for Digital India' in a national Conference at Bodhgaya.

- Published a paper titled 'Malnutrition Analysis of Aanganwaris' in a Journal of UG research and Innovation of University of Delhi in October 2016.

Ms. Priti Jagwani, **Assistant Professor**

- Presented a paper titled 'Privacy in Location Based Services: Protection Strategies, Attack Models and Open Challenges' in 8th ICATSE international conference on 'Information Sciences and Applications' held during 20-23 March in Macau, China.

Mona Adlakha, Assistant Professor

- Authored the chapter *'Mobile Commerce Security and Its Prevention'* for *Securing Transactions and Payment Systems for M-Commerce,* IGI Global, May 2016.

- Authored a chapter 'Troubleshooting - Hardware, Software and Networking*'* for the CBSE book *IT Tools Level -3 Student Handbook, Class XI* (First Edition*)',* CBSE, July 2016.

5) Participation of faculty members in seminars/workshops ,etc

Mr. Ranjan Kumar, Assistant Professor

- Participated in 3 weeks Refresher Course on Research Methodology at HRDC, Gorakhpur.

- Participated in one week Faculty Development Programme on Data Analysis Using Open Source Statistical Package 'R' organized by Gujarat Technological University, Chandkheda Campus, Ahmedabad, during 20 -26 February, 2017.

Ms. Priti Jagwani, **Assistant Professor**

- Delivered an invited talk in CDAC Pune titled as " Role of ICT in promotion of Sindhi Language" on 10th April 2017.

- Successfully completed DU Innovation project (along with two other faculties) 'ARB 301: Towards Real time monitoring of malnutrition using mobile computing'.

- Completed 4 week Orientation program and 3 week refresher course from HRDC Jamia Milia Islamia in May 2016 and March 2017 respectively.

Ms. Mona Adlakha, Assistant Professor

- Attended a week long training program on 'PHP and MYSQL' at DUCC, University of Delhi.

- Attended National Seminars on *Cyber Security in Cloud Computing and Social Networking* at Hans Raj College and *Spatial Data Analytics and Wireless Sensor Networks'* at Ram Lal Anand College.

Shri Gagandeep Sharma, Assistant Professor

- Participated in one day 'Capacity Building Workshop on E-content Creation' organized by Institute of Lifelong Learning, University of Delhi on 30 September 2016.

- Participated in one week Faculty Development Programme on Data Analysis Using Open Source Statistical Package 'R' by Gujarat Technological University, Chandkheda Campus, Ahmedabad, during 20 -26 February, 2017.

Mrs. Ruchika Aggarwal Assistant Professor

- Attended National Seminar on e-learning and MOOCs in Higher Education by MHRD in March 2017.
- Attended Two Day Faculty Empowerment Workshop by Indian Accounting Association, Delhi Chapter in January 2017.
- Attended International Workshop on Big Data Analytics, 2016.
- Attended Workshop on Nature Inspired Optimization Techniques, 2016.
- Participated in one week Faculty Development Program on Algorithms conducted by Department of Computer Science, University of Delhi in collaboration with ACM India Education and ACM Delhi NCR Chapter in July 2016.

6) Achievement of Students including their participation in various societies

    Students of the department have participated in technical fest held at various DU colleges. Few students attended the 'Seminar on Cloud Computing' at ARSD College and the 'National Conference on Advances in Computer and Information Technology' at SPM College.

7) Co-curricular Programmes conducted by the Department

This year Aryabhatta College achieved a milestone with the start of the prestigious B.Sc. (Hons) Computer Science course. The department envisions at familiarizing and training students with the latest technologies in computer science. With this objective, the Computer Science Society,

TechPioneers, was established. With the tagline 'Excellence Bit by Bit', we would like to use this as a platform to bring Aryabhatta College as the pivotal point for activities in computer science and related domains.

TechPioneers started its activities with a talk on 'Cloud Computing' by Dr Priya Ranjan, Professor at Dept. of Electronics and Electrical Engineering, Amity School of Engineering and Technology. The talk started with giving an insight into the various cloud services and service providers. The speaker gave an introduced to the various cloud service models. Dr Ranjan laid emphasis on the use of open source technologies. Mr Shyam Saini, student at Amity University, gave an introduction to network stacks, network filtering and OSI Model. He demonstrated the used of modules to modify the Linux Kernel.

In the second event, TechPioneers organized a talk on 'eCommerce 360 Degrees' by Mr. Vaibhav Bhargava, Senior Manager, Engineering, WalmartLabs, USA. The session started with explaining the 'Y2K' problem. Mr. Bhargava described the concept of STAIR (state the problem, tools available, algorithm, implementation, retry/ review) to solve any problem. The speaker further talked about the problems in implementation of eCommerce applications. He briefly explained how data mining works in the background.

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8) Library Budget sanctioned for the Department; **Rs 90,000/-**

9) (Strength ,Weakness , Opportunities, Challenges) SWOC Analysis of the Department

   1 STRENGTH

   1. Great Job Opportunities
   2. Focus on Skill Development
   3. User Friendly Design
   4. Well experienced, qualified, competent and dedicated faculty members.
   5. Good infrastructure facilities
   6. Learner centered and empathetic teaching
   7. Technology enhanced project based learning
   8. Regular remedial coaching classes
   9. Willingness of the faculty to take any administrative work
   10. The staff members possess resourcefulness and expertise in various fields of knowledge actively engaging themselves in research activities such as doing PhD, presentation of research papers in conferences, publication of research articles etc.

2 WEAKNESSES

1. Syllabus is not aligned properly
2. Skill Education Component Exam is very difficult as compare to General Education Component Exam
3. Majority of the students hailing from low economic, social and educational status mostly first generation learners.
4. No feeder courses are available

3 OPPORTUNITES

1. Great Job Opportunities in Software Industry
2. Self-Employment
3. Staff members are provided opportunities to participate in seminars/workshops/ conferences/refresher courses/ orientation courses.
4. Teaching manuals for teaching soft skills, language skills etc.
5. There is an opportunity to design indigenous modules for teaching add-on certificate courses.
6. Sufficient availability of books, journals and internet for the staff and the students.
7. Opportunity for sensitizing students in entrepreneurship.
8. Opportunity to the students in the preparation of competitive examinations including NET/SLET 7) Opportunity in the promotion of sports/cultural events.

4 CHALLENGES

1. International collaboration
2. Networking with National R & D labs., IITs
3. NRI students attraction
4. Contribute to rural development.

10) Future Plans of the Department

1. To establish collaboration and exchange program for faculties with reputed institutes like IITs and NIITs.
2. To submit proposals to funding agencies for research and Modernization of Laboratories (MORDROB)
3. To sign MOU with industries to get Industry Sponsored Projects and Internship, Training to Students
4. To motivate faculty for Industry Interaction with objectives to get Sponsored Projects and Placement of Students.
5. To convert the department into a leading research center in the country in specialized areas of Information Technology like IoT, Cyber security, Cloud computing, Artificial Intelligence and Machine Learning, Web Technology etc.