Event Report of Quality Improvement Programme (QIP) Short Term Course (STC) on "AI, Big Data and HPC Aligned Applications - A Modern Approach of Computing" during Dec. 31st, 2018 to Jan. 04th, 2019

Information Technology Department of Guru Nanak Dev Engineering College, Ludhiana concluded the weeklong series of lectures and hands-on practice sessions on Quality Improvement Programme (QIP) Short Term Course (STC) on title "AI, Big Data and HPC Aligned Applications - A Modern Approach of Computing". This STC was sponsored by QIP Centre of the Institute. The valediction programme of this course was organized in the consultancy seminar hall of the campus on Friday. This programme was organized with the **objective of sharing recent developments in the areas of Artificial Intelligence, Big Data and High Performance Computing with practical demonstration**. 17 resource persons of renowned institutions of the region had shared their views and further research areas among the participants.
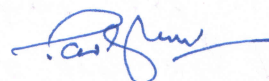
Dr. Sarabjot Singh Anand from Sabudh Foundation, New Delhi was invited as chief guest for the valediction of this programme. In his speech, chief guest emphasised that awareness of technology trends in AI and HPC is the need of the hour, but at same time security of information transferred is important area of concern. He further elaborated that role of hidden variables in machine learning.

In the whole five day programme the academicians, software professional and researchers were invited to deliver the expert talks during the course. During this programme, **Dr. Shashi Shekhar Jha from IIT Ropar elaborated the case study of Demands and Supplies Prediction for Taxis in Singapore**. Dr. Sukhwinder Singh, Director, Computer Centre at Panjab University, Chandigarh pointed out various **innovative ideas implemented at the industry and government level for the concern of Artificial Intelligence and High Performance Computing**. Dr. Kuldeep Kumar from Dr. B.R.Ambedkar National Institute of Technology, Jalandhar discussed the topics of **Practical Approach to Research Methodologies and Industry-Academic Research Trends** in Computing. He demonstrated the contents by sharing live examples.

Er. Navjot Singh from AlertEnterprise Chandigarh shared his views on **Disruptive Applications of AI in Various Industries with Use Cases and Scientific Solutions**. He elaborated the Alignment of Academic and Research in Modern Day AI based Disruption and Opportunity for Application Oriented Research Activities. Dr. Pankaj Bhambri from GNDEC Ludhiana presented the role and need of High Performance Computing with evolving research trends in bioinformatics. Mr. Vipin Gupta from U.Net Solution organized the hands on session on **Implementation of Docker Cluster and Software Defined Networking**. Dr. Nirmal Kaur from UIET Panjab University Chandigarh and Er. Amit Deoger from NITTTR Chandigarh delivered their expert talks on Need cum Techniques for **Energy Aware Scheduling and Implementation of Load Balancer** for Big Data Applications, respectively. Er. Sandeep Kumar Singla shared his practical exposure to Big Data Analytics using the R Lab.

Dr. Pankaj Bhambri, the course coordinator of this programme conveyed that this course was organized with the objectives to expose the faculty/ research scholars/ industry based persons in emerging technologies. This programme provided the practical foundation level training to enable the audience for insight into digital disruption and accelerating machine learning on AI through performance libraries and platforms. Dr. Bhambri informed that the course contents for this STC included AI, Bigdata & HPC aligned applications; Exposure to Analysis; Interpretation of Data; AI, Big Data & HPC Research Methods; Exploration of Contemporary Research in Teaching Learning; Real Life Implementation Scenarios; Case Studies and Lab Sessions.

Dr. Kiran Jyoti, HOD of IT Dept. and faculty coordinator of this course presented the summary & feedback report of this short term course at valediction programme. She shared the roles of social media, mobility, analytics and cloud computing. Dr. Sehijpal Singh, Principal of GNDEC mentioned the benefits as well as wastage of resources due to updation in technology every day. He discussed the significance of these types of courses for faculties as well as researchers and congratulated the course coordinators for organizing this STC. Participation Certificates were issued to 41 participants, which came from different regions of the country to attend this STC.

Pankaj Bhambri
Course Coordinator