RESEARCH GROUP

Creating High quality Research Groups and maturing them to a self-sustainable entity is one of the ambitions of the project. The salient points of the activities surrounding the research groups are given below. Every research group will work in a specific domain. Domain areas are also listed below

Research groups working will encompass the following points:

1. Training Workshops on Deep Learning and Machine Learning
2. National Conferences to engage wider community
3. Project competitions in the areas of AI and Machine Learning
4. Symposiums and Visits of Eminent People in AI
5. These Research group will apply for additional funding from different schemes and also explore the possibilities of private funding, Industry support
6. Depending upon the deliverables; groups may be partially supported by respective institutions
7. High quality and indexed Journals and Conference publications
8. Phd and MTech Student Co-advising
9. Research Sabbaticals for members of Research Group
10. Research oriented student projects will become feasible for Senior Years in UG
11. Industry-oriented capstone or senior-design projects may be taken up
12. Industry Visits and orientation will be felicitated
13. Industry will work on few applications of mutual interest with these research groups
14. It will help in defining some recent and critical research problems for the research groups
15. Research groups will be exposed to different institutions for collaborative work
16. Research groups will be able interact with the UK partner
17. Depending upon their specific research problems they will get access to a wider network of labs and researchers through Bennett University

Domain Areas in which the research groups will be working

Healthcare

1. Drug Management & Safety
2. Tumor Analysis
3. Cancer Care
4. Medical Image Analysis
5. Medical Insurance
6. Personalized Treatment
7. Health Monitoring
8. Disease Forecasting
9. Eye Disease Management
10. Epidemic Outbreaks Monitoring
11. Elderly Care
12. Transcultural Care
13. Physiotherapy

14. Telemedicine
15. DNA, Gene Analysis
16. Computational Biology

Agriculture

17. Plant Health Monitoring
18. Storage and Inventory Management
19. Plantation Monitoring
20. Pest Management
21. Water and Soil Conservation
22. Faster Plantation and Cropping
23. Satellite Farming
24. Monitoring using Remote Sensing

Space Research

25. Guidance, navigation, and control
26. Security Intelligence
27. Climate Risk Management
28. Environment Change Monitoring
29. Remote Sensing
30. Processing Multimodal Sensor Data
31. Telescopic Image Processing (Astronomy)
32. Planetology
33. Map Annotation & Management

Cyber Security

34. Network Intrusion Prevention
35. Anti-Malware Management
36. Online Scam Prevention
37. Network Activity Monitoring
38. Data Security and Privacy Protection

Education

39. Student performance monitoring
40. Smarter Evaluation
41. Teaching and Pedagogy
42. Predicting student performance
43. Smart Interactive teaching and Learning
44. Lecture Video Analysis

Video Processing

45. Video Content Analysis & Retrieval
46. Autonomous Driving
47. Surveillance Security & Monitoring
48. Compressed Sensing
49. Quality Control using Machine Vision
50. Assistive Technology for Visually Impaired Citizens
51. Real-time Transcription

52. Human Computer Interaction
53. Video Generation
54. Home automation
55. Video Summarization
56. Smart Traffic Management
57. Driving Assistance

Audio and Natural Language Processing

58. Audio and Natural Language Processing
59. Speech recognition for Regional Languages
60. Translation for Regional Languages
61. Text Summarization
62. Personalized Information Retrieval
63. Text Content Annotation and Retrieval for regional Languages
64. Search Engine for Regional Languages

Business

65. Sales Monitoring
66. Market basket analysis
67. User Behavior Analysis
68. Competitive Sales & Marketing
69. Customer Relationship Management
70. Customer Segmentation
71. Product Development
72. Digital Marketing
73. Customer Support Automation
74. Product Recommendation
75. Ad Targeting
76. Financial Market Analysis

Insurance

77. Fraud Detection
78. Insurance Risk Analysis

Banking

79. Decision Support
80. Fraud Detection
81. Loan Risk Analysis
82. Customer Segmentation

Crime

83. Crime Pattern Analysis
84. Crime Monitoring & Prediction
85. Criminal Behavior Analysis and Segmentation

Social Media Analytics

86. Opinion Mining
87. Market Requirement Analysis

88. Fake News & Rumor Monitoring Control
89. Political opinion mining for popularity prediction
90. User Privacy & Security Management
91. Personal Content Management

Entertainment

92. Face Detection and Applications
93. Real-time Mobile Augmented Reality
94. 3D Reconstruction
95. Automated Multimedia Generation
96. Multimedia Quality Management
97. Multimedia Compression
98. Affective Computing
99. Automated Game Playing
100. Text to Speech Generation for Regional Languages

Miscellaneous

101. Brain-Computer Interface
102. Network Simulation

Review Parameters For Research Group Progress

Outcomes and Progress will be measured using following parameters

Working of the Group

Adhering to timeline as per the guidelines, proactive response to emails from the mentors and providing required information, Creating a broader eco-system to synergize this initiative with other institutional activities, Number of regular/consistency in meetings or interactions happened both within and outside the research group

Skilling

Training students, research Scholars and teachers who may help them to do project/research, Certifications in DLI, cloud, Azure,Data Science, Machine Learning, AI Courses.

Research

Papers published in top conferences and journals (Only Scopus and SCI Journals will be considered), Grant written/submitted relevant to group research (International,National and State Funding Agencies).

Development

Development of new student projects, Contribution to the research community in terms of sharing archive of resources/datasets, code contribution: Progress in programming publicly available code in Github, Making new mobile apps or products useful to the society, innovations and startups.

Outreach

Creating meaningful image and perception to the outside world by regular, impactful coverage in social/print media, organizing competitions, international/industrial experts related to AI visiting your institution, Creating your perception as a quality AI group, Industrial and International Collaborations: Level of interaction/collaboration with industry/Academia.