Dartmouth workshop and its significance

The Dartmouth Workshop opened a Pandora's Box from which emerged the term 'Artificial Intelligence' and its various subfields like NLP, neural nets, and the idea of learning machines in general. AI with its simple yet broad definition has since encompassed several other fields of study and the focus has shifted to simpler yet specialized concepts and ideas.

While the original proposal focused heavily on 'Artificial Intelligence' as simulation of human brain model in general (as is mentioned in Shannon's and Rochester's proposals), AI today focusses more on replicating simple and specific subtasks performed by the brain rather than the brain itself. The consequence of this focus is evident in state-of-the-art models of today like SVM and CNNs for object recognition in images, RNNs for speech recognition and NLP, GANs for image translation and comparative modeling and so on. Also, the Monte Carlo method mentioned in the proposal as a way to tackle original problems has been surpassed by ML algorithms which learn from unknown data without any human intervention.

McCarthy talked about creating a new language understandable by computers and containing the notion of physical objects and events. However, AI today, focusses on deriving insights from plaintext data itself using NLP. This is much more desirable considering the colossal amount of text data we already have available. On the other hand, the notion of objects and events is captured in a new modular approach to programming known as Object Oriented Programming.

Despite all above, the workshop was a momentous occasion in the advancement of AI. The scientists who attended the workshops became pioneers of AI and went on to inspire further research in the fields like cognitive science and psychology. Arthur Samuel (an attendee) coined the term 'Machine Learning' and developed a self-learning checkers program which revolutionized the role of game bots in sports and e-sports industries. And thus, the workshop heralded a new age of Digital Revolution.