Raj Reddy: The 28th Turing Awardee

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Figure 1: A.M. TURING AWARD

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Figure 2: Raj reddy first indian turing award winner

1 Introduction

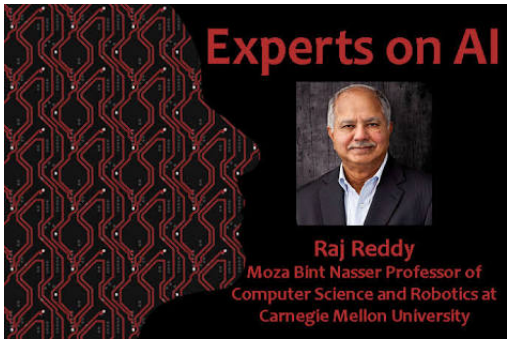

Figure 3: Raj Reddy

Dabbala Rajagopal "Raj" Reddy [1] is an indian-american computer Scientist and a winner of Turing award. He is one of the early pioneers of Artificial Intelligence and has saerved on the faculty of Stanford and carnegie mellon university for over 40 years. He was the founding director of Robotics Insitute at carnegie mellon university. He was instumental in helping to create **Rajiv Gandhi University of KnowledgeTechnologies** in india,to cater to the educational needs of low-income,gifted,rural youth. He is also the chairman of **Internatinal Insitute of Information Technologies,Hyderabad.** He is the first person of Asian origin to recieve **ACM Turing Award**, in 1994,the highest award in Computer science,for his work in the field of Artificial Intelligence.

2 Early Life

Dabbala Rajagopal Reddy was born in katur,chitoor district,Madras Presidency, British Raj.His father, Sreenivasulu Reddy, was an agricultural landlord,and his mother,Pitchamma was a homemaker.

Table 1: **Qualification**

Degree	**Specilization**	**Year**	**Institute**
Bachelor of science	civil engneering	1958	University of Madras(now **Anna University**)
Master of science	Information Technology	1960	University of new south wales
Doctrate	Computer science	1966	Stanford university

3 Career

Reddy is the Moza Bint Nasser University Professor of Computer Science and Robotics in the school of computer science at Carnegie Mellon University. From 1960,Reddy worked for IBM in Australia.He was an Assistant Professor of Computer Science at Stanford university from 1966 to 1969.He joined the Carnegie Mellon faculty as an associate professor of Computer Science in 1969. He became a full professor in 1973 and a university professor, in 1984. He was the founding director of the Robotics Institute from 1979 to 1991 and the Dean of School of Computer Science from 1991 to 1999. As a dean of SCS, he helped create the Language Technologies Institute, Human Computer Interaction Institute, Center for Automated Learning and Discovery (since renamed as the Machine Learning Department), and the Institute for Software Research. He is the chairman of Governing Council of IIIT Hyderabad and he is the Chancellor and the chairman of the Governing Council of the Rajiv Gandhi University of Knowledge Technologies, India.

Reddy was a co-chair of the President's Information Technology Advisory Committee (PITAC) from 1999 to 2001. He was one of the founders of the American Association for

Artificial Intelligence and was its President from 1987 to 1989.He serves on the International board of governors of Peres Center for Peace in Israel.He served as a member of the governing councils of EMRI and HMRI which use technology-enabled solutions to provide cost-effective health care coverage to rural population in India.

4 Research

Reddy's early research was conducted at the AI labs at Stanford, first as a graduate student and later as an Assistant Professor, and at CMU since 1969. His AI research concentrated on perceptual and motor aspect of intelligence such as speech, language, vision and robotics.Over a span of three decades, Reddy and his colleagues created several historic demonstrations of spoken language systems, e.g., voice control of a robot, large vocabulary connected speech recognition, speaker independent speech recognition, and unrestricted vocabulary dictation.Reddy and his colleagues have also made seminal contributions to Task Oriented Computer Architectures, Analysis of Natural Scenes, Universal Access to Information,and Autonomous Robotic Systems. Hearsay I was one of the first systems capable of continuous speech recognition.Subsequent systems like Hearsay II, Dragon, Harpy, and Sphinx I/II developed many of the ideas underlying modern commercial speech recognition technology as summarized in his recent historical review of speech recognition with Xuedong Huang and James K. Baker.Some of these ideasmost notably the "blackboard model" for coordinating multiple knowledge sourceshave been adopted across the spectrum of applied artificial intelligence.His other major research interest has been in exploring the role of "Technology in Service of Society".An early attempt in this area was the establishment, in 1981, of the fr: Centre Mondial Informatique et Ressource Humaine in France by Jean-Jacques Servan-Schreiber and a technical team of Nicholas Negroponte, Alan Kay, Seymour Papert and Terry Winograd.Reddy served as the Chief Scientist for the center.

Since 1995, Reddy and colleagues in China and India have worked on "Universal Digital Library Project".The project is currently attempting to archive 1,000 newspapers for the next 1,000 years and provide online access to UNESCO heritage sites.His current research centers around Technology in Service of Society, in particular creating voice only dialog based Apps for tasks such as online shopping and banking, online voting, a reading app that would read newspapers to people who cannot read, and dynamic realtime speech-to-speech translation of TV shows and lectures into local languages; all to enable semi-literate people in rural communities with connectivity and smart phones to benefit from advances in technology.

5 Awards and Honors

Figure 4: ACM Turing Award

[1]Association for Computer Machinery

Table 2: **Awards**

Award	Year	Organisation
French Legion of Honor	1984	French President
Turing Award	1994	ACM[1]
Padma bhushan	2001	Indian Government
Vannevar Bush Award	2006	US government

Figure 5: Raj reddy reciving padma bhushan

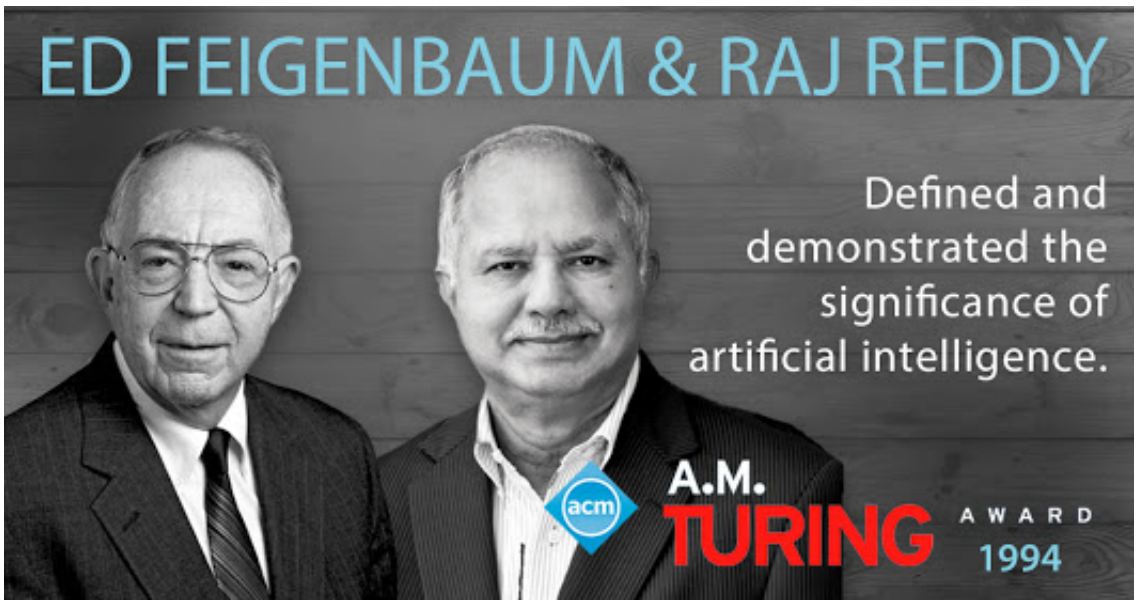

Figure 6: Raj reddy and ED Feignbaum

6 Contributions

6.1 Machine Intelligence and Robotics: Report of the NASA Study Group Executive Summary, Final Report Carl Sagan (chair), Raj Reddy (vice chair) and others, NASA

JPL, September 1979.

6.2 Foundations and Grand Challenges of Artificial Intelligence, AAAI Presidential Address, 1988.

6.3 To Dream the Possible Dream, Turing Award Lecture presented at ACM CS Conference, March 1, 1995

References

[1] https://en.wikipedia.org/wiki/Raj Reddy