

Often, It's Not about the AI

Neil Jacobstein

Narrowly focused task- and domain-specific AI has been applied successfully for more than 25 years and has produced immense value in industry and government. It doesn't lead directly to artificial general intelligence (AGI), but it does have real problem-solving value. It is useful to note that many of the reasons some otherwise meritorious AI applications fail have nothing to do with the AI per se but rather with systems engineering and organizational issues. For example, the domain expert is pulled out to work on more critical projects; the application champion rotates out of his or her position; or the sponsor changes priorities. A system may not make it past an initial pilot test for logistical rather than substantive technical reasons. Some embedded AI systems may work well for years on a software platform that is orphaned, and porting it would be prohibitively expensive. A system may work well in a pilot test, but it might not scale for huge numbers of users without extensive performance optimization. The core AI system may be fine, but the user interface could be suboptimal for a new set of users. The delivered application system might work well, but it could be hard to maintain internally. The system may work according to the sponsor's requirements, but it might not be applied to the part of the problem that delivers the largest economic results; or the system might not produce enough visible organizational benefits to protect it in subsequent budget battles. Alternatively, the documented results may be quite strong, but might not be communicated effectively across organizational boundaries. All software projects, with or without embedded AI methods, are vulnerable to one or more of these problems.

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