



With a shortage of machine learning developers bearing down on the industry, startups and big tech companies alike are moving to democratize the tools necessary to commercialize artificial intelligence. The latest startup, [Petuum](#), is announcing a \$93 million Series B this morning from [Softbank](#) and [Advantech Capital](#).

Founded last year by Dr. Eric Xing, a Carnegie Mellon machine learning professor, Dr. Qirong Ho and Dr. Ning Li, Petuum is building software to facilitate two components of machine learning development. First, the team is automating aspects of data preparation and machine learning model selection. This is useful for novices that might otherwise struggle to even make use of common machine learning frameworks like TensorFlow and Caffe.

Once models have been selected, Petuum can also assist developers in optimizing for specific hardware constraints. This means virtualizing hardware to remove barriers — taking out the extra step of managing a distributed GPU cluster.

“The way we treat AI is not as an artisanal craft,” Dr. Xing explained to me in an interview. “We are trying to create very standardized building blocks that can be assembled and reassembled like legos.”

Petuum founder Dr. Eric Xing inside the startup’s offices in Pittsburgh

The point here isn’t to solve every problem in machine learning, but rather to automate enough of the process that industry can move from 0 to 1. That said, Petuum is attempting to build for both the expert and the novice — a tough balance to strike.

“Everyone knows how to use Excel,” asserted Dr. Xing. “A layman can use Excel to create a table. A highly skilled statistician modeling certain phenomena can still use Excel.”

The other challenge facing Petuum is one of market strategy. As the tech industry grapples with its dumb money in AI problem, many investors have turned to heuristics to manage uncertainty — most popular of which is that horizontal platform AI plays don’t work.

The concern is that it’s difficult to outgun Google and Amazon in the machine learning-as-a-service and ML platform space as a startup that needs to balance feature development and spending. Dr. Xing deferred to the skill of his team and while he didn’t directly mention it — the goldmine from Softbank won’t hurt. This degree of capitalization is something that others like [H2O.ai](#) and [Algorithmia](#) can’t claim to date.

To the company’s credit, it is starting by going after healthcare and fintech customers. Though in the long run, Petuum doesn’t intend to cover every vertical. Petuum is working with beta testers in different industries so that in the future, outsiders can develop and deploy solutions on top of the platform.

Today’s investment comes from Softbank proper rather than [the \\$93 billion Softbank Vision Fund](#). It’s unclear whether Softbank intends to shift the investment into the fund in the future. Petuum currently claims 70 employees and says that it will be expanding simultaneously in product, sales and marketing.