WRITTEN TESTIMONY FOR HOUSE VA COMMITTEE

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Chairman Barrett and distinguished Members of the Subcommittee:

Thank you for the opportunity to testify. My name is Sid Ghatak, and for almost three decades, I have designed and deployed artificial intelligence and forecasting systems across finance, healthcare, pharmaceuticals, media, and government.

I currently serve as the Chief Technical Advisor for the National Artificial Intelligence Association, the premier organization representing over 1,500 businesses in the advancement of AI, and am also the founder and Chief Executive Officer of Increase Alpha, LLC, where we use artificial intelligence to predict stock prices and license these predictions to hedge funds.

In the federal government, I served in the General Services Administration for almost 4 years, where I was a Director of the Data & Analytics Center of Excellence. In that role, I co-authored the Federal AI Maturity Model three years before AI took the world by storm and contributed to previous Executive Orders on AI, specifically on the critical issues of data security and privacy.

At Increase Alpha, I architected a predictive AI model that generates alpha once thought impossible—a deep learning system exceptionally accurate at predicting equity prices. Increase Alpha far exceeds multiple industry benchmarks, including accuracy, Sharpe ratio, and alpha generation. This solution is not based on Large Language Models but is a purpose-built predictive engine designed for a very specific need.

I want to emphasize that it is entirely unrelated to the Department of Veterans Affairs and has no bearing on today's testimony. I mention it only as an example of how AI, when carefully designed with a clear purpose, can achieve exceptional effectiveness.

Taken together, this diverse background—spanning academia, government, and industry—has given me the rare opportunity to actually build AI systems that work well in the real world. Because I have spent my career outside the orthodox worlds of academia, venture capital, and big tech, I am also not beholden to herd mentality. Instead, I bring an expert, independent perspective which is especially valuable now, when much of the world is caught up in the 'art of the possible' with AI, when what is most urgently needed is a sober understanding of what is safe, practical, and ready to serve the public.

LLMs like ChatGPT, Claude, and Gemini are a powerful subset of AI, but they come with their own set of problems, specifically in healthcare, where hallucinations and sycophancy on the part

of chatbots can lead susceptible users down psychological rabbit holes. Which is why it's important to clarify that Al is bigger than *just* ChatGPT and its competitors.

To use an analogy: the steam engine transformed society, fueling the Industrial Revolution. While steam power still exists today, it gave way to other forms of power over time. Until steam engines were used to create the first railroads, no human had ever traveled faster than a horse. This new form of transportation opened the world's eyes to what was possible, just as ChatGPT has shown the world the art of the possible with AI. But early train travel was dangerously unreliable. Accidents were frequent, derailments common, and thousands of lives were lost before rail systems matured into the safe networks we know today.

The lesson is clear: revolutionary technologies will evolve and improve over time when the private sector and government work in collaboration. The same applies to Al.

As the Committee gathers information on how to modernize technology at the VA, I would like to offer three pieces of advice from my decades at the front lines of building and implementing advanced analytical solutions:

1. Expand the playing field: For the last several years, the world has been consumed with Large Language Models to the point where AI has become synonymous with it; however, that is not the case. Many other types of AI may have similarities to these models, but function very differently. Technologies that specialize in interpreting and understanding images, video, and audio, for example. Or technologies that are better suited to working with numbers and symbols instead of words. And new tech that has yet to be invented.

There is an old adage that when you are a hammer, everything looks like a nail. The world has become so enamored with LLMs, and rightfully so. Interacting with them can feel magical, giving you the sense that they are real people, though they are not. This may be why little to no investment is being made into these other areas.

At Increase Alpha, we have demonstrated clearly what can be done with other forms of Artificial Intelligence. I began building our models at the same time as the research underlying ChatGPT was published. I had also encountered the same compute, cost, energy, and reliance on Nvidia GPUs issues we still see today. I also took a different approach to conserve resources and focus on simplification using Predictive Intelligence, which led to lean Al models that use a minuscule amount of data compared to LLMs, and which are small enough to run on a cell phone.

Over 4 years, the success of my models directly contradicts the notion that massive amounts of data—along with their associated infrastructural and operational costs—are needed to build AI solutions that are extremely accurate, innovative, and reliable. Not to mention that they also consume ever-increasing amounts of energy and utilize models that produce outputs that are often incomprehensible and unexplainable. I have proven, in one of the most competitive and challenging tech arenas, that modern AI does not require all this if it is designed correctly from the outset. The Administration, in its recent

Al Action Plan, does not limit Al to the narrow definition of LLM and provides support for numerous types of technologies to be developed.

2. Correlation is not Causation: The difference between correlation and causation is best understood through an example. There is a near-perfect correlation between the number of Google searches for the word 'Nintendo' and the number of librarians in Michigan. It doesn't take a rocket scientist to understand that there is no actual relationship between the two trends.

Why is this so important? Because AI solutions today, such as ChatGPT, are based on correlations, even if those correlations are nonsensical. It is why they hallucinate (make up answers based on nothing), and why they have an inherent bias. While they give the impression of understanding and reasoning through their rapid generation of coherent text, they have no idea what the words themselves actually mean. They excel at predicting the next best word based on a vast network of correlations and are even better at providing the user with the answer they want to hear, even if it's not accurate.

To achieve true artificial intelligence, these systems would also have to know why the next word was predicted, which cannot currently be explained. They would need to know the truth behind every output. This is causation. That is how the human mind works. Until AI systems can understand and explain the 'why' of their inner workings and outputs, and become reliable sources of truth, they will never be truly intelligent. I remain hopeful that I will experience this in my lifetime, but it has not happened yet, nor is it likely to happen soon.

3. **Data, Data**: Al is an engine that requires data. But not just any data. Accurate, functional Al systems that produce explainable and auditable outputs require vetted and cleaned data, which we feel 100% confident using. By some estimates, the Federal Government has more data than any other organization in the world.

As a former Federal employee, I had the opportunity to work on projects that required this type of clean data to achieve their envisioned solutions. What I saw firsthand was the same thing I had seen in every other large organization. There was always more data than anyone realized. No one really knew where all of it was located or what it meant, and the sheer effort to gather, clean, and organize that data for proper use would have been enormous and cost-prohibitive.

This is one of the key reasons many AI and data analytics projects fail. Unless an organization is willing to make the investments in organizing and cleaning their data, these solutions—to put it bluntly—will be like lipstick on a pig. They will not work over the long run, and even when they do, they will not be reliable because they are not explainable.

We can see this already in current versions of Large Language Models, which are aptly named because they are built on unfathomably large amounts of language data. Some

of it is factually correct. Some of it is factually wrong. Some of it has good intentions. Some of it is prejudiced, with built-in hate, discrimination, and the bias of their very human authors. As the old saying goes, garbage in, garbage out.

What does this all mean for the VA and the well-being and care of our veterans? I can't claim to know. No one does. But I want to leave you with a prediction of my own. I believe we truly are on the verge of a revolution on the scale of the Industrial Revolution. So, if I could leave you with one idea today, it would be this: AI is actually much bigger than today's LLMs. And it is these technologies, many of which have yet to be invented, that will enable the VA to execute its mission "To fulfill President Lincoln's promise to care for those who have served in our nation's military and for their families, caregivers, and survivors."

In light of this, the Committee's work is vitally important to ensure that the investments the federal government makes into AI solutions will actually fulfill its mission. Our Veterans have given their bodies, minds, and very lives so that we all can enjoy ours, and we owe them more than our thanks and gratitude. We owe them the help and services they need when and how they need them.

I am privileged to be here today, amongst my esteemed colleagues, and I look forward to answering your questions. Thank you for this opportunity.