1. The Teleological Argument: Many of the philosophers of the late Medieval period accepted some form of the teleological argument. For instance, a succinct statement of it comes from Al-Ghazali, as follows (from The Jerusalem Tract):

It should be apparent to anyone with the minimum of intelligence ... if he looks at the wonders in God’s creation on earth and in the skies and at the wonders in animals and plants, that this marvelous, well-ordered system cannot exist without a maker who conducts it, and a creator who plans and perfects it. Indeed, human nature itself seems to testify that it is subjected to the Creator's direction, and directed according to His management. Hence God most high said: “Is there any doubt regarding God, the Originator of the heavens and the earth?” [Qu’ran 14:10]

We know design when we see it. For instance, imagine that you are hiking in the mountains, and when you reach the top, you find a bunch of rocks arranged in this way:

They look like chairs, don’t they? Further, imagine that these “chairs” were positioned to look out over the following view:
Imagine that the following two hypotheses occur to you:

H1: Some other hiker purposefully arranged the rocks in this way.
H2: The rocks just happened to fall into this arrangement by chance (e.g., some rock slide).

What would you conclude? Surely, you would conclude that someone had been there before you, and purposely ARRANGED these rocks in this way. After all, they’re perfectly suited to seat a human being, and they’re perfectly situated to look out over a beautiful vista. These rocks were arranged this way by DESIGN. And wherever there is design, there must be a DESIGNER.

Now apply this line of reasoning to the universe itself. That’s basically the teleological argument. After all, the universe seems to exhibit a perfect harmony, where everything is arranged just so, making it perfectly suitable for human life. Here is the argument:

1. The universe shows evidence of design; namely, it is:
   (a) highly complex and yet finely tuned so as to exhibit a perfect harmony.
   (b) perfectly arranged so as to be suitable for human life.
2. But, wherever there is design there must be a designer.
3. Therefore, the universe has a Designer (and this is God).

Averroes too speaks of “order … coming from an intelligent Creator.” His argument:

1. “the universe, with all its component parts, is found fit for the existence of man and things;
2. “secondly, that which is found suitable in all its parts, for a single purpose, leading to a single goal, is necessarily a created thing.
3. “So those two principles lead us naturally to admit that the universe is a created thing, and that there is a maker of it. Hence … it is the best argument for proving the existence of God.”
He elaborates in more detail:

“When a man sees a thing made in a certain shape, proportion and fashion, for a particular advantage is derived from it, and purpose which is to be attained, so that it becomes clear to him, that had it not been found in that shape, and proportion, then that advantage would have been wanting in it, he comes to know for certain that there is a maker of that thing, and that he had made it in that shape and proportion, for a set purpose. For it is not possible that all those qualities serving that purpose be collected in that thing by chance alone. For instance, if a man sees a stone on the ground in a shape fit for sitting, and finds its proportions and fashion of the same kind, then he would come to know that it was made by a maker, and that he had made it and placed it there. But when he sees nothing in it which may have made it fit for sitting then he becomes certain that its existence in the place was by chance only, without its being fashioned by any maker.

Such is also the case with the whole of the universe. For when a man sees the sun, the moon, and all the stars, which are the cause of the four seasons; of days and nights, of rain, water and winds, of the habitation of the parts of the earth, of the existence of man, and of the being of all the animals and the plants and of the earth being fit for the habitation of a man, and other animals living in it; and the water fit for the animals living in it; and the air fit for birds, and if there be anything amiss in this creation and edifice, the whole world would come to confusion and disorder, then he would come to know with certainty that it is not possible that this harmony in it for the different members of the universe—man, animals, and plants—be found by chance only.

He will know that there is one who determined it, and so one who made it by intention, and that is God, exalted and magnified may He be. He would know with certainty that the universe is a created thing, for he would necessarily think that it is not possible that in it should be found all this harmony, if it be not made by someone, and had come into existence by chance alone.”

Later:

“the earth has been created in a way which has made it suitable for our existence. Had it been unstable, or of any other shape, or in any other place, or not of the present proportion, it would not have been possible to be here, or at all created on it. ... So when its tranquility is in harmony with those living on it, it did not come into being by chance alone, but was made by someone's intention, and determination. Certainly it was made by One who intended it, and determined it, for the sake of those living on it.”
2. A Contemporary Version: While Averroes’s examples of why he thinks the universe is perfectly ordered for human life may seem antiquated, contemporary philosophers supply examples which do not. Physicists tell us that there are a range of parameters of our universe which are such that, if they were altered ever so slightly, life would be impossible. For instance, just to name a few, life would be impossible if:

- the universe had expanded slightly faster or slower.
- gravity were slightly stronger or weaker.
- the ratio of the proton’s mass to the neutron’s mass were slightly different.
- dozens of other examples can be found here (or here).

Some philosophers have likened the physical constants to a panel with dozens of dials, each of which can be set to thousands of different settings. If even one single dial were turned a few clicks to the right or left, life would be impossible.

[And note that they do not merely mean that life AS WE KNOW IT would be impossible (leaving open the possibility that some other form of life, e.g., non carbon-based, could exist). Rather, many of the constants are such that, had they been slightly different, the universe would have collapsed back into a singularity shortly after the Big Bang!]

How finely-tuned are we talking here? The odds of all the dials being set to the narrow margins that make the universe life-permitting are so vanishingly small, that it would be like throwing a dart from one side of the universe to the other and getting a bull’s eye. (Estimates vary, but to give you some idea, the odds given are usually something like 1 in $10^{100}$. That’s $0.0000000 \ldots (99$ zeroes in all) $0001$ – those are pretty slim odds!

So, which hypothesis is more likely?

(H1) That this all happened by chance, and we are just very very very very very lucky?
(H2) That the observed fine-tuning is the work of an intelligent Designer?

[Side note: This is the teleological argument (from ‘telos’ the Greek word for ‘purpose’). Today it is often called the ‘fine-tuning’ argument or the ‘intelligent design’ argument.]

3. Objections: Here are some criticisms:

1. Who Designed God?: If the universe requires a designer because all of its complexity is perfectly arranged, then so does God. So, who designed God?

Reply: First, recall that God is supposedly “simple” (i.e., not complex, has no parts). Design implies PARTS perfectly arranged together. Thus, as simple, God would not
require a designer. Second, recall that the “necessary existent” requires no explanation for its existence or perfection. Only contingent beings (e.g., the universe) require such explanations.

2. Observational Selection Effect: When asking the question, “What is the probability that any given observer will observe that their universe is fine-tuned for life?” the answer seems to be: 100%. This is because, if the universe were NOT fine-tuned for life, there wouldn’t BE any observers. Therefore, it shouldn’t surprise us that our universe has conditions that are just right for life. If it DIDN’T, no one would be around to notice!

Reply: Sure, the probability that any given observer will observe fine-tuning is 100%. But, that’s not the question. The question is, rather, What is the probability that any given universe will be life-permitting? And, as we have seen, the answer is: 1 in $10^{100}$.

To illustrate the difference between these 2 questions, consider the following scenario:

**Firing Squad:** You are in front of a firing squad of 1000 sharp-shooters. You hear them being given instructions to shoot you on the count of three. One! Two! Three! You cower as you hear many guns firing, but you do not feel any bullets hitting you. You take off your blind-fold and look around. There are 1000 bullet holes in the wall behind you, but not one of them has hit you. All 1000 of the sharpshooters missed their mark.

“Whoa!” you cry. “They missed! How improbable! This must have happened by design! The firing squad must have PLANNED to do this!”

“Nonsense!” someone replies. “You shouldn’t find it very surprising that they all missed. For, you wouldn’t be alive to even MAKE this observation if they didn’t!”

This would not be a very satisfying refutation of your hypothesis that the sharp-shooters had arranged ahead of time to not kill you. For, the question is not, What are the odds that any living observer who has just been fired upon by a firing squad will observe that the bullets were all fired in such a way as to be life-permitting? (Answer: 100%) Rather, the question is, What are the odds that 1,000 sharpshooters would miss their mark in the first place? (Answer: Nearly zero)

3. Multiple Universes: It would be very probable that some universe would turn out to be fine-tuned if there were an INFINITE number of universes. For, if there are an infinite number of universes, each with their own distinct set of physical parameters, surely SOME of them will inevitably be life-permitting. There might be many universes in one of two ways:
Eventually, the universe will collapse back in on itself, in what is known as the Big Crunch. After the Big Crunch, there will be another Big Bang—and this cycle will continue forever, with each successive universe having completely different laws and parameters.

There is an infinite “sea” of energy, and our own universe is just one tiny “bubble” on that sea. There are many universes, constantly coming in and out of existence all over this sea.

Reply: This only pushes the question back one level. For, now we may ask, “Who designed the multiple universes?” Furthermore, at the very least, it is worth pointing out that the atheist is now committed to a much more radical hypothesis than they previously were. Now, not only is the atheist committed to ONE universe existing inexplicably, but an INFINITE NUMBER of universes existing inexplicably. But there are also a number of reasons to reject the Many-Universes Theory:

First, even if the many-universe hypothesis would explain why there exists at least one universe that is life-permitting just as well as the God hypothesis, there is still this reason to prefer the God hypothesis: In our past experience, we OFTEN observe complexity resulting from intelligent designers, but we have NEVER observed complexity resulting from a universe-generating energy field, or a cyclical Big Bang-Big Crunch series.

We may still ask, what is the source of the complexity of the “universe-generator” or the “cyclical universe”?

Does the Multiple Universe Hypothesis REALLY remove our sense of wonder regarding the remarkably low probability that OUR universe is fine-tuned? Consider, for instance, the following scenario:

**Coin Flipper:** Imagine that you are bored in a hotel room, and begin flipping a coin repeatedly. It comes up heads. Heads. Heads. Heads. Heads. 100 flips in a row, heads every time! You keep flipping, and the coin lands heads every time. You form the hypothesis that someone has designed this coin to come up heads every time (i.e., it is a “trick coin”). But, then, someone comes to your room and explains to you, “Actually, you are in Hilbert’s Infinite Hotel right now. We have an infinite number of guests, and all of them have flipped a coin thousands of times in a row. As it turns out, you are the ONLY ONE who got heads every time.”

Would you be satisfied with this explanation? Or, would you still think to yourself that surely THIS coin is a trick coin? It seems like the existence of other universes has nothing to do with the probability that any particular universe is life-permitting. To think otherwise is to commit the Gambler’s Falacy (e.g., I’ve lost at the slots 10 times in a row, so the next time I play I’m more likely to win!).