Project Proposal One: The Interstellar Traveler

What is it?
My first proposal is a build of an interstellar travel module. Placed in the cockpit, the interface prompts the user to input age select an interstellar destination. Mapping travel time to anthropic measures, user takes an inrterstellar journey through the cosmos to teh selected destination, via 3D model of nearby stars. The database source includes details, distances, celestial coordinates (Right Ascension, Declanation) for approzximately 120,000 stars, merging three databases (the Hipparcos catalog, Yale Bright Star catalog, and teh Gliese Catalog of Nearby Stars).

Why does it matter?
Among the core intuitive intellectual impulses of is an urge to better understand the nature of the universe and the individual's place within in it. Further, given that our cognitive and sensory perceptions are formed by the phycial demands of our environment, humans will encounter perceptual breakdown in their ability to cionprehend or interpret data that exceeds anthropic parameters. Finding and engaging means of interacting and experiencing supersized distances through accessible representations is crucial to narrowing the gap in our understanding.

Who cares about it?
Anyone with an interst in understand our place within the cosmos and the comparative distances of our nearest celestial neighbors will be interested to explore.

What is the intended impact?
The intended impact of this projects is expand an individual's awareness an understanding of the vastness of physical space in the cosmos.

Why and how is it a novel contribution to the field?
While most visualization of this type map distance to visual proportions, this interactive tools will illustrate distance as a mapping of time. Units of mearures may be cutomize to personal experience of the end user, eg input value for age. Age becomes the unit of measure ie each second duration of travel equal an entire lifetime.

What is prior work?
100,000 Stars - This interactive 3D visualization of the stellar neighborhood created by Google includes over 100000 nearby stars. Additional work of historical note in this areas is the video entitled Powers of Ten. Powers of Ten an exploration of magnitudes. Starting at a picnic by the lakeside in Chicago, transports the viewer to the outer edges of the universe. Every ten seconds, the starting point is rendered from ten times farther out, then moves inward with ten times more magnification every ten seconds.

Which questions do you want to answer?
- Given the limitation of human comprehension of vast expanses and large values, what methods of visualization best help narrow the gap between what is comprehendible and what is actual/true?
- How can anthropic measures be best leveraged to to connect human experience to measures beyond comprehension?

Project Proposal Two: ‘If the Earth…”

What is it?
An interactive module that uses experiential knowledge of real world objects and travel distances to generate propotional models illustrating the distance between celestial objects. Initially, prompted by the positioning statement, “If the Earth were a…”, the user selects a real world object from a dropdown list of a select element. Following this selection, the user will place the object in a map using the google maps API, when prompted by the positioning statement “...in…”. Step three requires the user to select an second celestial object from a dropdown list.

The program will then calculate the proportional distance on the map and indicate a real world object of relative proportional value.

- If the Earth were the width of a human hair in Harrisburg, PA, Alpha Centauri would be the hole in a cherio in Baltimore, MD.
- If the Earth were the width of a human hair in NYC, Alpha Centauri would be the hole in a cherio in Bridgeport, CT.
- If the Earth were a pea in Seattle Washingtom, Alpha Centauri would be the hole in a cherio in San Jose, Costa Rica, and would take 58 days to walk

Why does it matter?
The vastness of space separating stars makes basic understanding of the size, scale and physical properties of celestial objects cognitively inaccessible to the majority of folks who come in contact with cosmological data, due to the massive scale. This interactive visualization tool will help them to narrow the gap in understanding.

Who cares about it?
Lay persons who lack intimate, scientific knowledge of the size and vastness of celestial bodies will be interested to interact with cosmological data that is otherwise cognitively inaccessible.

What is the intended impact?
The intended impact is to make the vast size distances between stars more relatedable/accessible by reducing proportional values into anthropic measures and distances.

Why and how is it a novel contribution to the field?
My proposal is novel in that it personalizes the experience, allowing end-user to self-identify a geographic point of reference from which a real world distancemay be mapped. While such scale models have been built previously, none have leveraged these real world spaces in virtual map renderings

What is prior work?
If the moon were 1 pixel is described by its creator as “A tediously accurate scale map of the solar system that illustrates the mind-boggling amount of space between planets.” He further describes, “Pictures in books, planetarium models, even telescopes are pretty misleading when it comes to judging just how big the universe can be...I had heard about real-world scale models that spanned across entire cities, so I thought it was time to see if a computer screen could provide a similar experience in a browser.” My project may be differentiated from this project in that my project continues to use ‘real-world’ scale models, but renders them on demand using selector elements and map renderings.

Which questions do you want to answer?

- Given the limitation of human comprehension of vast expanses and large values, what methods of visualization best help narrow the gap between what is comprehendible and what is actual/true?
- How can anthropic measures be best leveraged to to connect human experience to measures beyond comprehension?

Project Proposal Three: ‘Lift the Veil: Data Counterveillence Measures”

What is it?
This project proposal examines the variance between experiment and control group behaviors in response to Data Counterveillence Measures. Motion sensors will be setup to mintor pathways of physical movement through a designated field. For the control group the data collection process will be unaccompanied by the data counterveillence measure, while the experiment group will be subject to the measure. Experimental group members when entering the field, will be confronted with visual projection that will be responsive to motion sensor data detected within the field, thus call attention to the otherwise unnounced dataviellence.

Why does it matter?
Given the ever-increasing capability, sofistication, and omnipresence of data collection, it is important to educate the general public not only about the implicatiuon of data disclosure, but to call attention to data collection process where and where they are occurring.

Who cares about it?
While the general public may not often care, they should. Further in the interest of transparency abd preservation of privacy rights, organizations collecting personal/behavioral data incur an ethical obligation to create awareness and realize a transparency of their collection’s scope.

What is the intended impact?
The intended impact is to demonstrate the behavioral impact of the data couterveillence measure as significant. Variations of movement in through the test field between the control and experiment groups are intended to demonstrate a difference in awareness of data collection process.

Why and how is it a novel contribution to the field?
While effect to emply data counterveillence measures have been leverage in virtual environments, ie, web interactions/monitor indicators, these efforts have not widely been deployed in physical environments and public spaces.

What is prior work?
I once saw a documentary about a man who attented to digitize all aspects of his life. When department store security would reliably cite his use of personal cameras as an invasion of their privacy, he would rightly point to the overhead surveillence cameras as performing the same task. It is the relative inert, passive presence that allows this intervention to go largely unnoticed.

Which questions do you want to answer?
To what extent does the implimentation of data counterveillence alter peoples behavior? Does the visual pronouncement of data collection devices in public spaces effectively translate to awareness?