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MEET OUR TEAM

SYED KUMAIL HAIDER

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Passionate about the fusion of Space Exploration, Computational Biology and Artificial Intelligence,
I am an ambitious BS Artificial Intelligence student at "The Islamia University of Bahawalpur". With a strong focus on Specie replication, I am intrigued by the unexplored realms of deep reinforcement learning and other emerging topics such as imaginative thinking and Multiverse calculation etc.

USWA MARIAM

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Possess a fervent interest in the amalgamation of Space Exploration, Computational Biology, and Artificial Intelligence.
I am a motivated undergraduate student in Artificial Intelligence pursuing my Bachelor of Science degree at The Islamia University of Bahawalpur. My area of particular interest is Species replication, and I possess an avid fascination for unexplored domains such as deep reinforcement learning, imaginative thinking, and Multiverse calculation among others.

OUR PROJECT

INTRODUCTION

The model utilized in the AUSA project for simulating flexibility is founded on an advanced technique that involves the training of a humanoid powered by artificial intelligence. Such training requires essential Earth environmental data to equip this robot with the capacity to predict its performance capabilities and respond effectively when deployed into extraterrestrial environments. To ensure accurate results, it's crucial to consider stark variations between different planetary conditions- such as dramatic differences in temperature levels. This is where utilizing a temperature scale becomes critically important because it provides guidance towards introducing AI-humanoid framework gradually from conventional terrestrial atmospheres towards exaggerated climatic situations akin present on planets like Venus or Mars. By replicating adjustments at every phase while subjecting these robots systematically through incremental changes amid varying temperatures during simulations, investigators can confirm precise prognostications regarding their efficiency in dealing proficiently with multiple hurdles encountered within diverse surrounding regions beyond Earth - thereby paving the way forward for robust space exploration activities simulation support via gateways opened up by achieving desired accuracy levels using effective warm-up approaches strategies derived based around novel ideas stemming naturally out interactive communication lines used frequently among stakeholders!

SYED KUMAIL HAIDER

IDEA CONTRIBUTION

The magnificent contribution made by Syed Kumail Haider has essentially laid the solid groundwork for our current project. It is remarkable how his astute comprehension of investigating and exploring methods through which AI humanoid robots can rapidly adapt to different environmental circumstances was an indispensable factor - one that ignited this concept from its very beginning, all while steadfastly championing it throughout! His exquisite understanding of artificial intelligence challenges in space exploration alongside practical skills have culminated into a ground-breaking initiative; one that surges beyond pre-established boundaries whilst simultaneously addressing real-world problems with acute precision. Moreover, Syed's adroit perception regarding the significance of adaptability as not only a core organizing principle but also as a pivotal aspect within technological advancements allowed him to put forth innovative thinking towards shaping and guiding an initiative seamlessly blended amidst swiftly evolving junctures pertaining advanced Artificial Intelligence technologies- applicable both on earth here and unexplored territories beyond!

USWA MARIAM

IDEA CONTRIBUTION

Uswa Mariam was a priceless asset to our team. Her inclusion brought forth an excellent and inventive outlook that shed new light on the project we were undertaking. With her exceptional insights, she offered invaluable knowledge about how best to prepare for any probable shifts in extraterrestrial landscapes that may pose a challenge. As time progressed, it became abundantly clear just how imperative it is not only to display adaptability but also proactivity when devising AI-powered humanoids suited for such tasks: Uswa's expertise allowed us all firsthand experience of this principle. Instead of simply being reactive towards unforeseen complications arising, we instead set out with ambitious goals revolving around anticipating these challenges before they could manifest themselves fully whilst simultaneously organizing viable solutions alongside them. Thanks partially due to Uswa Mariam’s visionary contributions which raised our entire program into unprecedented domains where Artificial Intelligence humanoid technology had never been acquainted or experienced with prior – by providing unmatched levels of intelligence and resilience enabling effortless navigation through previously uncharted territories ultimately leading toward optimal results!

HUMAN CHARACTERISTICS

SKIN

It is necessary to develop an algorithmic depiction of the AI-humanoid that accentuates its physiological, behavioral and cognitive characteristics. The framework utilized for this endeavor ought to be customized in a meticulous manner so as to enable it to seamlessly conform to tumultuous environmental circumstances found within virtually simulated spatial borders.

The skin tone scaling is done by using Fitzpatrick Scaling:

i. White
ii. Beige
iii. Light Brown
iv. Medium Brown
v. Dark Brown
vi. Black

ENVIRONMENT CHARACTERISTICS

CLIMATE

The objective that lies ahead entails the intricate development of advanced algorithms to aptly simulate natural and authentic interactions between a humanoid entity and its inanimate surroundings. The difficulty level escalates owing to the need for these applications to be able to incorporate an extensive range of environmental variables, encompassing temperature fluctuations, atmospheric conditions as well as other external stimuli.

The climate and duration factors used in our project on the environment are listed below:

i. Radiations Level
ii. Nitrogen Level
iii. Oxygen Level
iv. Duration Period

EXPLAIN OUR APPROACH

OUR DATASET

IMAGINARY

Initial Parameters

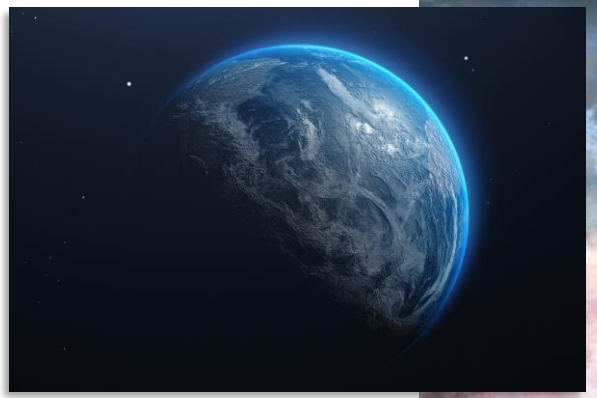
i. Initial Skin Tone (Fitzpatrick Scale)
ii. Initial Continent
iii. Initial Climate
iv. Initial Radiations Level

Final Parameters

i. Duration
ii. Final Continent
iii. Final Climate
iv. Final Radiations Level
v. Impact





MODELS USED

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The neural network Models used in our project experiments are:

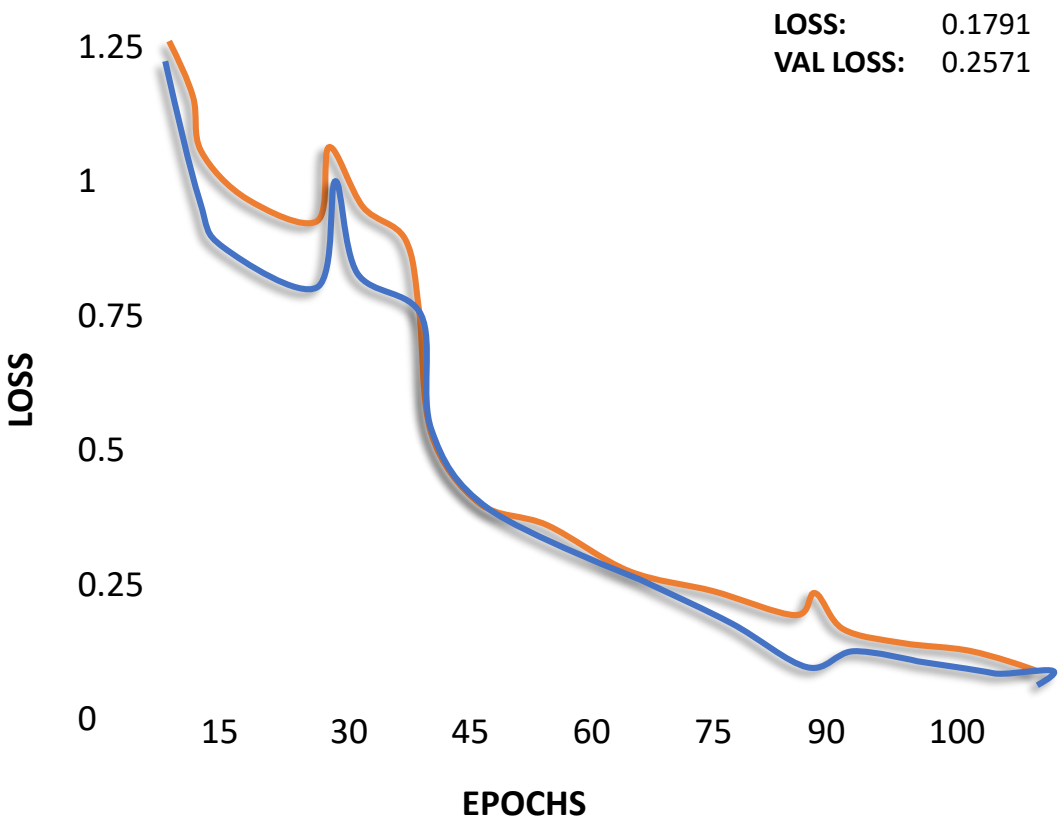
i. LSTM
ii. GRU
iii. RCNN
iv. CNN
v. RNN

MODEL	EPOCHS	BATCH	UNITS	TEST LOSS
LSTM	1000	32	50	0.0981
Bi-LSTM	300	32	50	0.1130
GRU	200	32	50	0.0939
RNN	500	32	300	0.0460
Linear Regression	N/A	N/A	N/A	0.4897
Decision Tree	N/A	N/A	N/A	0.0150
Random Forest	N/A	N/A	N/A	0.0130
XG Boost	N/A	N/A	N/A	0.0064

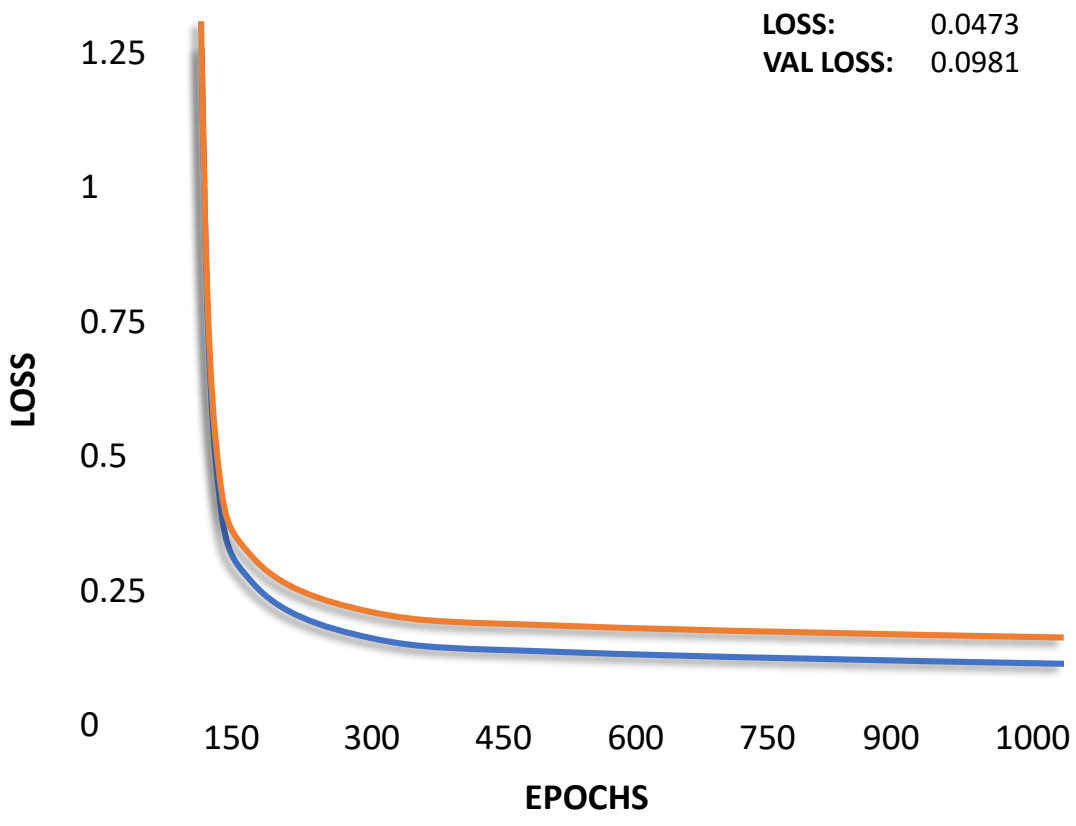
CHARTS

RESULTS

GRU_100_50



LSTM_1000_50



CONCLUSION

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The AUSA project represents a comprehensive investigation of the potential for adaptability between AI and humanoids in extraterrestrial settings. Our approach is systematic, commencing with the identification and analysis of core human values that serve as the foundation for training our AI-humanoid model. Employing machine learning algorithms, our rigorous training regimen enables dynamic adaptation to widely varying environmental conditions. An essential stage in this process entails the selection of suitable destinations amenable to simulation and testing scenarios designed specifically to reflect specific characteristics found on diverse celestial bodies. This pivotal step provides valuable insights into facets mediating effective performance by an adaptive system comprising these two entities collaborating within shifting environments beyond Earth's atmosphere.


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THANKS