# V. Guru Charan

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## Experience

**Chief Artificial Intelligence Officer**                                   *May 2024 – Present*
*Collaborative Dynamics*

- Leading research initiatives in cognitively-inspired approaches to Generative AI, focusing on Theory of Mind and Wisdom of the Crowd.
- Driving internal red-teaming and blue-teaming efforts to strengthen AI security.
- Conducting research on the explainability and alignment of large language models.

**Executive Director of Artificial Intelligence R&D**               *March 2024 – April 2024*
*Collaborative Dynamics*

- Advancing research to enhance the security of large language models.

**Lead AI Research Scientist**                                     *Aug 2023 – March 2024*
*Collaborative Dynamics*

- Fine-tuning large language models for a variety of downstream natural language processing (NLP) tasks.
- Developing LLM-based Retrieval Augmented Generation (RAG) models.

## Education

**Dayalbagh Educational Institute**
*Doctorate in Physics*

- Title: Large-$N$ Chern-Simons models in String and M-Theory ↗

## Technologies

**Languages:** Python, MATLAB, Mathematica, LaTeX

**Python Libraries:** PyTorch, Scikit-learn, TensorFlow, Pandas

## Publications

**Enhancing LLM Security Through the Gated Panel of LLMs Architecture**                              To be published

V Agam, ***V. Guru Charan***, Kripabandhu Ghosh

**Can LLMs faithfully generate their layperson-understandable 'self'?: A Case Study in High-Stakes Domains** ↗                              Dec 2024

Arion Das, Asutosh Mishra, Amitesh Patel, Soumilya De, ***V. Guru Charan***, Kripabandhu Ghosh

**LaMSUM: A Novel Framework for Extractive Summarization of User Generated Content using LLMs** ↗                              June 2024

Garima Chhikara, Anurag Sharma, ***V. Guru Charan***, Kripabandhu Ghosh, Abhijnan Chakraborty

**On the higher spin spectrum of Chern-Simons theory coupled to fermions in the large flavour limit** ↗                              Feb 2018
**Journal of High Energy Physics**

***V. Guru Charan***, Shiroman Prakash

**On the higher-spin spectrum in large $N$ Chern-Simons vector models** ↗                              Jan 2017
**Journal of High Energy Physics**

Simone Giombi, **_V. Guru Charan_**, Vladimir Kirilin, Shiroman Prakash, Evgeny Skvortsov

[Anomalous dimensions in non-supersymmetric bifundamental Chern-Simons theories](#) ↗               Sept 2014
**Journal of High Energy Physics**

**_V. Guru Charan_**, Shiroman Prakash

## Invited Talks

- Keynote Talk at Future Tech Summit'24, organized by AI Research Centre, Woxsen University in Dec, 2024.
- Talk on "Survey of Large Language Model Research Landscape", at Department of Computer Science, National Institute of Technology Andhra Pradesh in Jan, 2025.
- Talk on "Large-$N$ Chern-Simons theories", at Department of Physics, University of Tsukuba in July, 2018.
- Talk on "Higher spin spectrum of Chern-Simons theory coupled to fermions", at Kalvi IPMU, University of Tokyo in June, 2018.
- Talk at International School on Quantum and Nano Computing Systems and Applications (QANSAS) organized by Dayalbagh Educational Institute in Nov, 2017.
- Talk on "Anomalous dimensions in Chern-Simons theories", at Department of Physics, University of California, San Diego in June, 2017.
- Talk on "The Large-$N$ Limit of Quantum Field Theories", at International School on Quantum and Nano Computing Systems and Applications (QANSAS) in Nov, 2016.
- Talk on "Anomalous dimensions in non-supersymmetric bifundamental Chern-Simons theories", at National Strings Meeting organized by Indian Institute of Science Education and Research, Mohali in Dec, 2015.

## Professional Services

Reviewer for NeurIPS, EMNLP, ICML, AISTATS, NAACL, COLING, WiML, NeurIPS workshop - CALM.

## Awards & Achievements

- Secured $99^{th}$ percentile in highly competitive Union Public Service Commission (UPSC) Civil Services Preliminary examination twice (2022, 2020).
- Recipient of the esteemed Director's Medal for academic excellence in the M.Phil. (Physics) examination at Dayalbagh Educational Institute, Agra, in 2013.
- Cleared Council of Scientific and Industrial Research – National Eligibility Test (Lecturership) in Physics, 2013.
- Awarded the prestigious Director's Medal for securing the highest marks in B.Sc. Honours (Physics) examination, Dayalbagh Educational Institute, Agra, 2011.
- Indian National Science Academy (INSA) Summer Research Fellow under supervision of Dr. Jatinder Vir Yakhmi at Bhabha Atomic Research Center (BARC), Mumbai, 2010.

## Teaching experience at Dayalbagh Educational Institute

- Taught Discrete mathematics (Credits: 3.0) to Electrical engineering students (Spring 2017).
- Taught Numerical analysis (Credits: 3.0) to Civil engineering students (Fall 2016).
- Instructor to B.Sc. and B.Tech. students in Physics laboratory (Fall 2014 to Spring 2016).

## Leadership & Additional Contributions

- Initiated [Srijanshala](#) ↗, a weekly enrichment camp based on Socratic method, and activity-based personalized learning for under-privileged children in Roorkee (2021-Present).
- Founded [Agro-Homeopathy based Organic Botanical Herbal Garden (AHOBHAG)](#) ↗, the first herbal garden in India to employ the protocols of permaculture, agro-homeopathy and zero-tillage; lead a 15 member team, profitable since the $18^{th}$ month of establishment (2020-Present).