KEERAT KAUR GULIANI

Pre-Final Year Undergraduate — Indian Institute of Technology Roorkee

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EDUCATION

Indian Institute of Technology, Roorkee   *July 2018 - Present*
Bachelor of Engineering, Civil(Major), Computer Science(Minor)
Cumulative Grade Point Average-9.656/10 (Departmental Rank: 2/151)

The Mother's International School, New Delhi   *2014 - 2018*
Percentage in Class 12- 98%
CGPA in Class 10- 10/10

CAREER OBJECTIVE

I am working towards a research career in Machine Intelligence & its Applications in diverse fields. Eager to learn new state-of-the-art technologies. My interests include:
Deep Learning — Data Analytics — Causality & Reinforcement Learning — Application of computational methods in Public Domain problems such as Healthcare & Policy-Making — Civil Engineering. Self-motivated and Quality-oriented, I focus on research with impact.

PAPERS

- ***VacSIM: Learning Effective Strategies for COVID-19 Vaccine Distribution using Reinforcement Learning*** [**Preprint**]
  A: Raghav Awasthi, Keerat Kaur Guliani, Arshita Bhatt, Mehrab Singh Gill, Aditya Nagori, Ponnurangam Kumaraguru, Tavpritesh Sethi
  Submitted to *AAAI 2020*. Presented at the *RAISE Summit 2020* & *MIT's Vaccines For All Conference*.

- ***Less Wrong COVID-19 Projections With Interactive Assumptions*** [**Preprint**]
  A: Aditya Nagori, Raghav Awasthi, Vineet Joshi, Suryatej Reddy Vyalla, Akhil Jarodia, Chandan Gupta, Amogh Gulati, Harsh Bandhey, Keerat Kaur Guliani, Mehrab Singh Gill, Ponnurangam Kumaraguru, Tavpritesh Sethi
  Submitted to the *Bulletin of the World Health Organisation*.

- ***DEAP Cache: Deep Eviction Admission and Prefetching for Cache*** [**Preprint**]
  A: Ayush Mangal, Jitesh Jain, Keerat Kaur Guliani, Omkar Bhalerao
  Submitted to *AAAI 2021* as a Student Abstract.

- ***Universal Adversarial Perturbations - A Survey*** [**Preprint**]
  A: Ashutosh Chaubey, Nikhil Agrawal, Kavya Barnwal, Keerat K. Guliani, Pramod Mehta
  Submitted to *ACM CSUR*.

INTERNSHIPS

- **Synaptic Connectivity Detection [Intern Diary]**   **June 2020-Present**
  Lichtman Lab, Harvard University
  Performed Synaptic Location & Connectivity Detection to get Synaptic Segmentation in the mouse cerebellum to aid Developmental Connectomics research.

- **CoronaActionIndia**   **Summer 2020**
  MEDAIM, IIIT Delhi
  Developed an OpenAI gym environment from scratch as a basis for a novel RL pipeline to ensure fair distribution of Vaccines developed against Corona virus.

- **Classification of EEG Signals**   **Summer 2019**
  CBTB Lab, IIT Roorkee
  Developed machine-learning architectures to classify the EEG Signals into Focal or Non-focal epileptic type, that would increase efficiency & accuracy of epileptic diagnosis.

EXPERIENCES

- **Attendee, NeurIPS Conference [Certificate]**   **Dec 2020**
  Annual Conference to foster the exchange of research on neural information processing systems.

- **Participant, Data Science for Social Good Workshop [Lightning Slide]**   **Nov 2020**
  Georgia Institute of Technology, USA (Virtual)
  Workshop focusing on the application of data science techniques to problems of significant societal impact.

- **Team Leader, Global Adobe Analytics Challenge**   **Oct 2020**
  Successfully completed and made recommendations for improving the Nike experience based on a comprehensive analysis of their data using the Adobe Analytics workspace, amongst 1600 teams from across the world.

- **Delegate, Winter Workshop on Machine Intelligence & Brain Research**   **Jan 2020**
  IIT Madras, India
  Comprehensive interdisciplinary workshop focusing on the robust interactions between engineering and neuroscience.

TECHNICAL STRENGTHS

Programming Languages	Python, C++, R
Operating Systems	Windows, Linux
Tools	Google Colab, Jupyter Notebook, Visual Studio Code, GNU Octave, GIS, VAST
Relevant Courses Taken	Machine Learning, Probability & Statistics, Linear Algebra, Computer Vision, Numerical Methods & Computing, Electrical Engineering, Economics, Quantum Computing
Familiar with	Tensorflow, Pytorch

ACADEMIC ACHIEVEMENTS

- Awarded the Summer Research Fellowship for 2020 by the Indian Academy of Sciences.

- All-India Rank 7964, Joint Entrance Examination(Advanced) 2018 among 1,50,000 students.

- All-India Rank 7130, Joint Entrance Examination(Mains) 2018 among 12,00,000 students.

- All-India Rank 14558 and Category Rank(UR) 8891, National Eligibility cum Entrance Test (Medicine) 2018, among 13,26,000 students.

- National Talent Search Examination Scholar (2016).

EXTRA-CURRICULAR

- **Core Member, Vision & Language Group, IITR [Website Link]:**
  Student group that fosters Deep Learning research culture in the campus by discussing relevant research papers and working on related projects.

- **Joint Secretary, The Debating Society, IITR**:
  My recent achievements in Parliamentary Debating include: Fifth best adjudicator, MukMem ProAm Debate, 2020 and Third best adjudicator, Overall Third at Inter-IIT Cultural Meet, 2019

- **Editor, Watch Out![Website Link]:** Watch Out! Is the official campus media body of IITR.