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| Pinki Kumari  Second Year Graduate  Department of Computer Science and Engineering | [pinkikumari22.github.io](https://pinkikumari22.github.io/) |  |  |

Education

Degree Institution CPI Year

MTech IIT Gandhinagar 7.6 2022 - Present

BTech VGI Microsoft, Greater Noida (AKTU) 8.33 2016 - 2020

Experience

* **Teaching Assistant, Indian Institute of Technology Gandhinagar:**
  + Computing(ES112): Designing and conducting lab tasks and checking assignments. [Aug 2023 - Present]
  + Aarohan(FP601): Managed orientation of 450+ students with a team of 25 TAs

and was in the backend team, including five people. [July 2023]

* + Data-Centric Computing: Conducted labs and tutorials on topics of ML, EDA, Algorithms [Jan - July 2023]
  + Computer Networks(CS433): Handled a class of 75+ students, conducted quizzes,

checked assignments, and assessed final project presentations. [Aug - Nov 2022]

* **Summer Intern, ThirdAI Corp.: [June 1st - July 31st, 2023]**
  + Utilized ThirdAI’s Universal Deep Transformer (UDT) for pre-training, training, and fine-tuning LLMs on CPU instead of GPU.
  + Embedded evaluation system for benchmarking various models like BERT, Open AI, LLaMA, and BOLT.

Skill Summary

* **Languages:** Python, SQL, HTML5, CSS
* **Tools and Frameworks:** Kaggle, DrivenData, Git, Flask, VS Code
* **Data Science Libraries:** PyTorch, TensorFlow, Keras, Matplotlib, Seaborn, Scikit-Learn, Numpy, Pandas, JAX
* **General:** Machine Learning, Deep Learning, Natural Language Processing, Prompt Engineering

Projects

* **Hashing Algorithms for efficient training of LLMs and applying LSH on NTK: [Jan 2023 - Present]**
  + The objective is to probabilistically infer desired outputs without the need for explicit training of neural networks. This involves the construction of the NTK matrix(H\*).
  + Utilization of Locality Sensitive Hashing (LSH) in conjunction with Neural Tangent Kernels (NTK) under the guidance of [Prof. Anirban Dasgupta](https://sites.google.com/site/anirbandasgupta).
  + Applied concepts from Optimization Theory in Machine Learning and incorporated neural network principles.
* **Online Maintenance Complaint Portal: [Jan - April 2023]**
  + Designed a website for IIT Gandhinagar and created an Online Maintenance Complaint Portal that addressed existing challenges, including page reloading, authentication, and potential security vulnerabilities.
  + The task involved enhancing user experience and fortifying the website against potential threats.
  + Proficiently utilized SQL, Python, Flask, HTML5, and CSS.
* **Machine Learning: [Jan - Oct 2023]**
  + Trained a Named Entity Recognition (NER) model using spaCy to extract legal entities from legal documents. The trained model can recognize entities such as organizations, persons, dates and judges in legal texts.
  + Developed a Python library named “[customized-decision-tree-library-0.1](https://pypi.org/project/customized-decision-tree-library/)” for creating decision trees.
  + Created a Streamlit application to visualise the effects of cross-covariance by a 3-sigma ellipse plot.
* **Contact List Search: [BTech Project]**
  + Developed a user-friendly web application for contact management, featuring contact addition and deletion capabilities using buttons.
  + Implemented autocomplete functionality to enhance user experience, providing real-time contact name suggestions while typing.

Achievements

* Secured All India Rank (AIR) 61st (Armed Forces Quota) in Bihar Combined Entrance Competitive Exam (BCECE)
* Qualified for the GATE (CS) twice (2020, 2021)
* Solved 350+ questions on LeetCode, with a contest ranking 1447/461,271.
* Solved Questions on GeeksForGeeks, CodingNinjas, etc.