

Sachit Gaudi

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EDUCATION

Master of Science in Computer Science & Engineering

East Lansing, MI

Michigan State University **CGPA: 3.833/4**

Jan 2023 - *

- My research is centered on algorithmic fairness and privacy, advised by Prof. Vishnu Boddeti. I work on training models with fairness constraints¹. Additionally, I focus on unlearning private information.
- Graduate Teaching Assistant²: Database Systems (Summer'23), Intro to programming C++ (Fall'23)
- Relevant Courses: Computer Vision, Graph Theory, Parallel Computing

B.Tech in Mechanical Engineering

Guwahati, India

Indian Institute of Technology, Guwahati; **CGPA: 7.30/10**

July 2014 - May 2018

- Relevant Courses: Linear Algebra, Data Structures and Algorithms, Calculus, Differential Equations.

SKILLS AND INTERESTS

Programming: Python, C++, Java, PyTorch, Transformers, Shell Scripting.

Search and Databases: MySQL, OracleSQL, Solr, MongoDB, Elastic Search, AWS - Elastic Compute Cloud

Other Tools and Technologies: Docker, Flask, Django, Git, Jenkins, RabbitMQ

Cloud: AWS, Azure, IBM

Conferences: CVPR, EMNLP

WORK EXPERIENCE

Software Development Engineer - II

Mumbai, India

Reliance Jio Haptik, Conversational Commerce team

Jan 2020 - Dec 2022

- Led research and implementation efforts in multi-task BERT-based transformer models, significantly improving the accuracy of product labeling, NER, and intent detection for JioMart Search (25M MAUs).
- Engineered a collaborative filtering-based product personalization module for targeted recommendations.

Software Development Engineer - I

Mumbai, India

Reliance Jio Haptik, Conversational Commerce team

Jan 2020 - Dec 2022

- Designed & implemented Mediator pattern, a solution which integrates messages all sources including Meta.
- Owned developer module, involved migration to async queues. Led effort to implement centralised logging into Elastic Search, minimizing developer debugging time. Contributing to a 98% up-time guarantee.
- Implemented back track algorithm to improve Intent detection and Tf-idf to improve semantic extraction.

Lead Backend Engineer

Hyderabad, India

SmatSuite

Jan 2019- Jan 2020

- Took responsibilities of architecture and database design for chatbot. Developed Analytics, Reseller, Integrations, and Multilingual modules for SmatBot product.
- Improved recommendations of Media Articles for Clients' social media for SmatSocial product

PROJECTS & RESEARCH EXPERIENCE

Pattern Unrecognition

Michigan State University, East Lansing, MI

Apr 2023 - *

- Developed a novel solution addressing spurious correlation, resulting in a +8% increase in generalization accuracy through integrating fairness constraints into MDA³.

Distributed Deep Learning

Michigan State University, East Lansing, MI

Jan - May 2023

- Developed gradient map-reduce parallelization strategy achieving a parallel efficiency of **95%** for training deep learning models across multiple servers. P-GPT⁴ algorithm provides optimal parameters for data scheduling, threading, and process parallelism for a given network typology.
- *Technologies – C++, NCCL, MPI, OpenMP, Multi-threading, Linux*

¹<https://sachit3022.github.io/files/Optimisation.pdf>

²<https://sachit3022.github.io/teaching/>

³https://sachit3022.github.io/files/Pattern_Recognition.pdf

⁴<https://github.com/sachit3022/pGPT/blob/master/Report.pdf>

Deep Learning based Image Search for e-commerce

Indian Institute of Technology, Kharagpur

Sept – Oct 2019

- Worked on Image Search for Capillary Technologies. Triplet Pair Siamese Network with base model an ensemble of VGG16 and less dense CNN trained with hinge loss achieved 10% recall with flexibility to train on search rank data compared to the 7% of SOTA algorithm.

Actionable Business Insights for hotels

Saint Joseph's University, Philadelphia, PA

May - July 2017

- Performed Sentiment Analysis using VADER algorithm and assigned sentiment values to the aspects. Measured how reviews along aspects effect occupancy rate in hotels. Achieved at an accuracy of 85% showing strong correlation.

CERTIFICATIONS

Foundations of AI/ML

Indian Institute of Technology, Kharagpur

Hyderabad, India

Apr 2019 - Sept 2019

- Relevant Courses: Linear Algebra, Probability, Statistics, Machine Learning, Information Retrieval, Natural Language Processing, Image Processing.

ACHIEVEMENTS

2020 - Received Big Hand award from Reliance for exemplary quarterly performance.

2019 - Received Scholarship based on Merit from IIT, Kharagpur. (Top 10%)

2014 - Secured Joint Entrance Examination All India Rank of **2240** among 0.15 million candidates. (Top 1.5%)