


# Aditya Agre

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 github.com/adityaagre

## Professional Experience

### Vibtree Technologies

Machine Learning Intern

Jan 2024 - June 2024,

- Developed Langchain RAG for AI Voice calling platform: 'OneIn-box.AI.' This made catering to clients' data feasible.
- Created LangGraph agents for chatbots and therefore facilitated multi-session performance.
- Fine-tuned language models such as Llama3 and Gemma, and participated in daily sprints, reporting to the CTO.

## Projects

### Email Extractor

Tackling an Unsolved Problem

- Created a model to extract Business needed Precise email IDs from Erroneous AI-voice call transcripts.
- Curated a 300-thousand row dataset using Whisper3 for speech-to-text then fine-tuned Llama3 and Gemma on Azure.
- Please read more at: [github.com/adityaagre/Email-Extractor](https://github.com/adityaagre/Email-Extractor)

### NatNet

Google's Solution Challenge

- Our mobile app 'NatNet' was shortlisted by Google amongst the Top 100 applications worldwide.
- Built using Flutter and Firebase, it is dedicated to promoting environmental events citywide and connecting hosts with volunteers.
- Please read more at: [github.com/adityaagre/NatNet](https://github.com/adityaagre/NatNet)

## Research

### Hypergraph Colouring

Algorithm Design

- Authored a review and a research paper, and developed a Deterministic Approximation Algorithm for Proper Hypergraph Coloring: A practical solution to an NP-H problem.
- Please read more at: [github.com/adityaagre/Hypergraph-Coloring](https://github.com/adityaagre/Hypergraph-Coloring)

### Number Theory Research

Mathematics

- Proposed and validated an innovative hypothesis through a rigorous analytical proof and verification across 4 Million numbers.
- Explore more at: [/adityaagre/Number-Theory-Research](https://github.com/adityaagre/Number-Theory-Research)

## Technologies

- Python, R, C, C++, SQL, Postgres, Firebase, PineCone.
- Scikit, Pandas, PyTorch, TF, Keras, CUDA-GPUs, LLMs, SLMs, STTMs, LangChain, LangGraph. RAG.
- CSS, HTML, JavaScript, PHP.

## Summary

I'm a Computer Science and Engineering student at Pimpri Chinchwad College of Engineering, focusing on Machine Learning, Statistics and Algorithm Design. Currently interning at Vibtree Technologies, Bangalore.

## Achievements

**All India Rank : 1871**

GATE Exam 2024 : Data Science and AI

**Google's Solution Challenge 23**

Shortlisted: Top100 teams worldwide

**IndoML 2023**

Participated in India's Largest Machine Learning Conference at IIT-Bombay

**DSA, Competitive-Programming**

Accomplished over 300 challenges on competitive platforms, achieving a 2-star rating (1418) on Codechef and a peak Leetcode rating of 1471.

## Education

**B.Tech. - 2021-25**

**Computer Science**

Pimpri Chinchwad College Of Engineering  
8.31

**Honors - Deep 2023-25**

**Learning**

Pimpri Chinchwad College Of Engineering  
8.4

**Class 12 2021**

DAV Public School Pune

92.8%

**Class 10 2019**

DAV Public School Pune

97.4%

## Volunteering

- Management Head at Gooogle DSC.
- Active member of communities like E-chai Startup Network, Tensor Flow (TFUG) Pune, Python Dev. Pune.