Adithi Satish

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Education

Technical University of Munich, M.Sc. Data Engineering and Analytics   Oct 2022 - Jun 2025
- GPA: 1.7
- **Thesis:** Towards Sustainable and Diverse City Trips: Leveraging Large Language Models to Address Data Scarcity and Popularity Bias in Tourism Recommender Systems

PES University, B.Tech in Computer Science and Engineering   Aug 2018 - May 2022
- GPA: 9.55/10.00
- **Capstone Project:** Explainable Deconstruction of Semantics in Written English

Experience

Working Student - Machine Learning, Siemens AG – Munich, Germany   Oct 2024 - *ongoing*
- Identification and classification of over 15000 substances of concern from chemical and product descriptions, according to CSRD and DNSH regulations in the Environmental Protection Data Analytics team using **Natural Language Processing** techniques
- Responsible for data curation, cleaning and creation of sample knowledge graphs to identify ideal formats of data representation for datasets from 4 different sources

Working Student - Python Development, Siemens AG – Munich, Germany   Mar 2023 – Sept 2024
- Worked on developing various functionalities and code refactoring for a pension analytics tool in the Risk and Asset Management team
- Automated data validation pipelines for outlier reduction and quality check and reduced computation time by approx. 80%
- Developed risk scenario analysis functions for over 20K accounts and fixed derivatives

Spring Analyst, Morgan Stanley – Bengaluru, India   Jan 2022 - Jul 2022
- Interned in the Transformation and Corporate Technology Division.
- Responsible for onboarding the New Product Approval system onto phones using an internally developed shim.
- Migrated the entire **CI/CD pipeline** from Jenkins freestyle jobs to a pipeline and automated the release procedure.

Undergraduate Teaching Assistant, PES University – Bengaluru, India   Jul 2021 - May 2022
- Worked as a Teaching Assistant for two courses: [Jul 2021 – Dec 2021] Data Analytics under Dr. Gowri Srinivasa, and [Jan 2022 – May 2022] Network Analysis and Mining under Prof. Bhaskarjyothi Das
- Responsible for conducting hands-on sessions, creating and evaluating 5 unit quizzes, coding assignments in the social network analytics domain, designing and evaluating a Kaggle InClass Competition, and holding office hours.

Publications

SynthTRIPS: A Knowledge-Grounded Framework for Benchmark Data Generation for Personalized Tourism Recommenders   2025

Ashmi Banerjee, *Adithi Satish*, Fitri Nur Aisyah, Wolfgang Wörndl, Yashar Deldjoo

In Proceedings of the 48th International ACM SIGIR Conference on Research and Development in Information Retrieval 2025 | 10.1145/3726302.3730321

Tuning Into Bias: A Computational Study of Gender Bias in Song Lyrics   2025

Danqing Chen*, *Adithi Satish**, Rasul Khanbayov*, Carolin M. Schuster, Georg Groh

Enhancing Tourism Recommender Systems for Sustainable City Trips Using Retrieval-Augmented Generation 2024

Ashmi Banerjee*, *Adithi Satish*, Wolfgang Wörndl

Recommender Systems for Sustainability and Social Good. RecSoGood 2024. co-located with ACM RecSys 2024. Communications in Computer and Information Science, vol 2470. Springer | 10.1007/978-3-031-87654-7_3

iREAD: Interpretable REcognition and Automated Deconstruction of Semantics in Written English 2023

Adithi Satish, Ameya Bhamare, Drishti Hoskote, Vidish Raj, Gowri Srinivasa

EDULEARN'23 Proceedings | 10.21125/edulearn.2023.0668

Naagarik: A Machine Learning Framework for Intelligent Analysis of Civic Issues 2021

Adithi Satish, Shriya B Shankar*, Kavitha K. N.

2021 Asian Conference on Innovation in Technology (ASIANCON) | 10.1109/ASIANCON51346.2021.9544777

Projects

Enhancing Sustainable Tourist Recommendations using Retrieval Augmented Generation 2024

- Built a **Retrieval Augmented Generation (RAG)** pipeline which uses Large Language Models (LLMs) to enhance a Tourism Recommendation System (TRS) to recommend sustainable tourist destinations from a catalog of 200 cities in Europe.
- Compared performance of LLMs like **Llama-3.1** and **Mistral** using various offline metrics, including an LLM Judge (**GPT-4o-Mini** and **Claude Sonnet**)

Combining Topic Modeling and Gender Bias Measurements for the Analysis of Lyrics 2024

- Used **BERTopic** to perform topic modeling on English lyrics to analyse recurrent themes in over 500K songs, their historical development and social implications.
- Performed gender bias analysis on the top topics per genre, using the **Single Category Word Embedding Association Test (SC-WEAT)** using **Word2Vec**, to analyse the gender roles and misogyny present in song lyrics.

Yet Another Centralized Scheduler 2020

- Implemented a distributed scheduling framework to help distribute load and help performance in big data systems using **Python**.
- Three different scheduling algorithms - Random, Round Robin and Least Loaded incorporated.
- Performed a comparative analysis of the performance overhead for all three algorithms.

Technologies

Languages: Python, SQL, C++

Interests: Generative AI, Agentic AI, Natural Language Processing, Machine Learning, Data Science, Data Analytics, Software Development

Miscellaneous

Spoken Languages: English (C2), German (B2.1), Hindi, Kannada