

Mallika Subramanian

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EDUCATION

Columbia University

New York, NY

Master of Science in Computer Science

Sep 2022 – Dec 2023

- Specialization in Machine Learning
- Courses: Computational Learning Theory, Natural Language Processing, AI, Analysis of Algorithms

International Institute of Information Technology, Hyderabad

Hyderabad, IN

Bachelor of Technology (Honors) in Computer Science Engineering (CSE), GPA 9.52/10.0

Jul 2018 – May 2022

- Courses: Data Structures, Databases & Analytics, Operating Systems, Distributed Systems, Computer Vision
- Teaching: Head TA for Computational Social Sciences (Spring 2022), TA for Databases & Applications (Fall 2020)
- Achievements: Dean's List Awardee for every semester (2018-2022) – top 10% of the batch
- Positions: Chapter Admin (Lean In Circle), Events & Outreach Team Member (Entrepreneurship Cell)

EXPERIENCE

Software Engineering Intern

May 2021 – Jul 2021

Google India

Bangalore, IN

- Worked with the GSeekh team for the Read Along android app that serves 30 million children as users
- Implemented an end-to-end new and unique feature of a conversational bot in the English language
- Incorporated Google's LaMDA language model and Google Cloud APIs for Speech Recognition and TTS
- Proposed an iterative conversation design which stores history for context
- Handled a large Java code base on Android Studio with Protocol Buffers and Stubby Clients for communication

Student Training in Engineering Program (STEP Intern)

May 2020 – June 2020

Google India

Bangalore, IN

- Built a Time Lapse Visualizer web application with Google Maps for users to plan their travel during COVID-19
- Enabled support to visualise customizable geographic datasets with greater than 100K records
- Designed filtered map views and 3 robust database schemas with ReactJS, Django & GMaps API – [\[Project Demo\]](#)

Undergraduate Research Assistant

May 2020 – May 2022

Precog @ IIT Hyderabad

Hyderabad, IN

- Worked with Prof. Ponnurangam Kumaraguru at the Center for Computational Social Science
- Conducted research on projects in Social Computing, Applied NLP and Analysis of Online Social Networks
- Led a team and published a [paper](#) on 'Battling Hateful Content in Indic Languages HASOC '21' at **FIRE '21**
- Collaborated with Prof. Kiran Garimella (Rutgers University) on a Data Science for Social Good research
- Presented and published a [full paper](#) on diagnosing web data from ICTs at the **ICTD Conference, 2022**

MAJOR PROJECTS

Spotify Recommender | *Python, PyTorch, Scikit Learn, Network Embeddings*

Nov 2020 – Dec 2020

- Engineered a song recommender system for ≈ 1 Million Spotify song playlists
- Generated embeddings for each song using the LINE algorithm and provided subset based recommendations
- Trained an ML model with 68% accuracy to solve cold start problem with network embeddings

Maze Wiki Search Engine | *Python, XML*

Nov 2020 – Dec 2020

- Wrote a parser and indexer for a large corpus of 40GB Wikipedia data with TF-IDF to improve search relevancy
- Supported search for 2 types of queries – normal and field based, with a search time of 5 seconds

E-Commerce Web Application | *MERN MongoDB, Express, React, Node*

Mar 2020 – Apr 2020

- Built a web application to support bulk purchases for 2 kinds of users – vendors and customers
- Implemented 5 distinct features to add, remove, dispatch products from cart, edit orders, write reviews, provide ratings, and effectively search the database using fuzzy string matching

TECHNICAL SKILLS

Languages: C, C++, Python, Java, Bash, HTML5, CSS, Javascript, JQuery

Frameworks: PyTorch, TensorFlow, Django, MATLAB, Flask, React, Express, NodeJS, Android Studio

Tools & Databases: Git, Google Cloud Platform, VS Code, IntelliJ, MySQL, MongoDB, PostgreSQL