

# Gurvinder Singh Yadav

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## EDUCATION

### Indian Institute Of Information Technology

Dharwad, Karnataka

*Bachelor of Technology, Major in Data Science and AI*

*Dec. 2020 – May 2024*

- **CPI: 8.21**
- **Courses:** Linear Algebra, Probability, Statistics, Data Structures & Algorithms, Professional Communication, Discrete Maths, Data & Business Analytics, Database Management Systems, Computer Networks, Machine Learning, Algorithms for Artificial Intelligence, Natural Language Processing

## EXPERIENCE

### Associate Software Engineer Trainee

Jan. 2024 – Present

*Incture*

*Bangalore, Karnataka*

- Learned and developed Java Spring Boot web applications
- Designed and implemented MySQL database for employee and project management. Implemented Spring JPA based layer to perform CRUD operations and used Spring web to develop a REST framework.
- Performed unit and integration testing using JUnit and Mockito.

### Machine Learning Intern

July 2023 – Nov 2023

*Drift Lab Innovations*

*Bangalore, Karnataka*

- Developed the a langchain powered sales assistant with Llama2 and streamlit UI ***Repo Link***.
- Managed AWS S3 buckets and SQL database for training models for different personas and dialects of speakers.
- Segmented and annotated speech data of multiple speakers for fine tuning using Whisper-AI
- Created a Docker image with all the dependencies for the given models, Deployed them on Vast.ai instances.

### Machine Learning Research Intern

Nov 2022 – Dec. 2022

*Indian Institute Of Information Technology*

*Dharwad, Karnataka*

- Scraped data from world history & sacred texts website utilising selenium with async architecture. Cleaned and processed the scraped dataset to be analysed using Apache Spark.
- Configured and ran a multinode spark cluster and ran pattern mining algorithms and found relationships between verses, prefixes and there meanings.
- Analysed the evolutionary pattern in these sacred text and tried to see how particular use of grammar, and vocabulary evolved over time.

## PROJECTS

### Sentiment and Stance Detection | *Pandas, TensorFlow, Streamlit, Matplotlib* | ***Repo Link***

- Scraped labelled tweets(manually labeled in a research paper). Preprocessed and tokenised the tweets.
- Used the emoji as an additional feature in determining the sentiment and stance of the particular tweet.
- Trained Deep Neural Network, Long Short Term Memory(LSTM) Network, Bi-LSTM, Gated Recurrent Unit, BERT, and RoBERTa models and analysed their performance.
- Achieved 95.66% and 82.37% accuracy using stacked Bi-LSTM models for stance and sentiment classifications Respectively.

### Call Graph Prediction using GNN | *Pytorch-Geometric, NetworkX, Pandas* | ***Repo Link***

- Represented call graphs as networkX graphs and prepared a custom data class loader to convert networkX graph to pytorch-geometric representations.
- Trained Graph Convolution Network, GraphSage and Graph Isomorphism Network on the prepared call graphs.
- Achieved 89.08%, 88.31%, 92.23% accuracies respectively for the above listed models.

### Twitter Hate Speech Analysis | *Apache Spark, Twitter API, Spark ML*

- Applied Linear Regression, Logistic Regression, Support Vector Machine, Bi-Directional Encoder Representation from Transformer models on twitter hate speech dataset.
- Orchestrated an Apache Spark cluster using Docker and classified realtime twitter data into hateful and otherwise.

### Stock Recommender | *Selenium, Pandas, Streamlit, Chakra-UI* | ***Repo Link***

- Developed a selenium based web crawler to scrape data from Grow and Ticker website.
- Recommended stocks on the basis of likeability, hotness, market demand and public sentiment on official channels such as money control.

## SKILLS

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**Languages:** Java, Python, C/C++, SQL (Postgres), JavaScript, HTML/CSS, R

**Frameworks:** Mockito, Spring-Boot, FastAPI

**Developer Tools:** Git, Docker, TravisCI, Google Cloud Platform, VS Code, Visual Studio, PyCharm, IntelliJ, Eclipse

**Libraries:** pandas, NumPy, Matplotlib, PyTorch, Selenium

**Soft Skills:** Critical Thinking, Problem Solving, Communication, Team Work, Time Management