

Anand Hegde

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Github

EDUCATION

IIT Dharwad

Bachelor of Technology in Computer Science and Engineering

Nov 2020 - Present

CPI: 9.40

EXPERIENCE

Arista Networks

May 2023 - July 2023

Software Development Internship

- Worked with the data science team on Root Cause Analysis engine. The engine can analyse the problems the WiFi client faces and provide recommendations.
- Significantly improved data analysis capacity from **15 minutes to maximum of 30 days** following optimizations during my tenure.

IIT Gandhinagar

May 2022 - July 2022

Research Internship

- Implemented **Markov Chain Monte Carlo** sampling on **Bayesian Neural Network** for bnn-zoo. The model predictions are calibrated, and the model outputs probabilities correspond to true probabilities.
- Contributed to pyprobml which is code for the book 'Probabilistic Machine Learning' by Kevin Murphy.

IIT Dharwad

Apr. 2022 - Jun. 2022

Research Internship

- Worked on fake speech detection using the Modulation Spectrogram and Spectrogram of speech.
- Implemented Resnet-34 using PyTorch, and conducted several experiments with it to compare the performance in various settings.

PROJECTS

NWKRTC Bus Tracking

End-to-end model, which takes the location of the buses from the conductor's phones and shows to the passengers.



- **Tools & technologies used:** Flutter, spring-boot
- Created a mobile application that tracks the bus using GPS on the conductor's mobile.
- Currently used by **North Western Karnataka Road Transport Corporation** for its premium buses and has **500+** downloads on playstore.

AITREK

Enviromnet to code bots for playing a Shooting game.



- **Tools & technologies used:** Python, Websockets, Turtle
- Created a game environment where participants can program bots and play against each other.
- Created a user-friendly UI to visualize the game when the bots fight.

Whatsapp Clan Messenger

Fetches phone numbers from an Excel/CSV file and sends invitations of Fest to everyone.



- **Tools & technologies used:** PyAutoGUI, Lackey, Pandas
- Reduced the time required to send the invitation of Technical Fest 'Parsec' to students of different colleges by 90%.
- Used lackey for finding the text box even when the browser size is adjusted.

Kepler Planet Classification

Created ML model to classify data from Kepler telescope into planets and non planets



- **Tools & technologies used:** streamlit, pandas, sklearn, plotly, matplotlib
- Created a website for visualizing the data. The data was classified using Neural networks and random forest.

Parts of Speech Tagger

Created a Parts of Speech tagger using universal tagset



- **Tools & technologies used:** NumPy, pandas, nltk
- Used HMM as it captures the temporal nature of the data.
- Used Viterbi algorithm to predict each sentence's parts of speech.

Erdős-Gyárfás Conjecture for P-12 Free Graphs

- Proved the Erdos-Gyarfas conjecture for a class of graphs called P-12 free graphs.
- Used a novel backtracking algorithm to achieve a state-of-the-art result about the conjecture.

Compete- Exam Management System

Create an exam with multiple choice questions and get the results instantly.



- **Tools & technologies used:** PHP, HTML, JavaScript(JS), CSS, MySQL
- Created Exam management system with user login, sign-up, email verification, attempt quiz, and result analysis pages.

TECHNICAL SKILLS


–**Programming:** C/C++, Python, SQL, Java

–**Libraries/Frameworks:** Flutter, Spring, Git, NumPy, Pandas

ACHIEVEMENTS

Secured 1st Position Artificial Intelligence Competition GuardAIans Parsec *2022*

Developed an AI bot that uses a DFS algorithm to play the game.

2nd Place in Devhack 4.0 for developing AI-assisted terminal command runner for Linux  *2023*

Guest Lecturer at IIT Gandhinagar *2022*

Delivered a lecture on Markov Chain Monte Carlo Sampling in the course Probabilistic Machine Learning.

POSITIONS OF RESPONSIBILITY

General Secretary, Technical Affairs, IIT Dharwad *Present*

Club Head, Artificial Intelligence Club, IIT Dharwad *2022-2023*
