Aditya Iyengar

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PROJECTS

FOOTBALL PREDICTIONS | Course Project, IIT Bombay
Apr 2020 – Jun 2020 | Prof. Preethi Jyothi
- Designed a **neural network based model** to analyse historical football data and predict future results with **53% accuracy** for the Premier League 2019-20, matching the accuracy achieved by bookmakers.
- Compared several statistical models to predict football match results and implemented a **Poisson random process model** to build a football match simulator.

PREDICTIVE TEXT GENERATOR | Self Project, Online
Apr 2020
- Generated an **N-gram model** and trained it on over 10 million words to predict the next word, given a sequence of words.
- Implemented techniques such as *Kneser-Nay Smoothing* and *Stupid Backoff* in order to make the model work better, using Perplexity as a quantitative measure of the model effectiveness.

WORKOUT CLASSIFICATION | Self Project, Online
Mar 2020
- Collected and analysed data from activity trackers in order to predict which form of workout the participants performed.
- Compared several supervised learning algorithms such as **Decision Trees**, **Random Forests**, **Gradient Boosting** and **SVMs**, achieving up to 80% testing accuracy.

MODELLING GEAR CASTING | Course Project, IIT Bombay
Feb 2020 | Prof. Pradeep Dixit
- Performed multiple simulations in order to determine the optimal riser and mold parameters for the casting of an **industry-grade alloy steel gear**, reducing the effects of hotspots using chills and feeder aids.

THTF LAB, IIT BOMBAY | Research Assistant
Nov 2019 - Present | Prof. Arunkumar Sridharan
- Working at the **Thermal Hydraulic Test Facility**, IIT Bombay to design a fluid flow calibration system for venturimeters and orificemeters.

POSITIONS OF RESPONSIBILITY

DEPARTMENT ACADEMIC MENTOR | IIT Bombay
June 2020 - Present
- Mentoring a group of six sophomores and helping them cope with any problems they may face in the department or otherwise
- As a part of a team of 30+ mentors, liaising with faculty and coordinators to ensure that the students smoothly transition into the department.

CONVENER | Literati IIT Bombay
April 2019 - May 2020
- In charge of ideating and curating content for quizzes, wordgames and other literary events in the institute attended by **over 400 people**, as well as ensuring their promotion and smooth conduct.

EDUCATION

IIT BOMBAY
Bachelor of Technology in Mechanical Engineering with Minors in Computer Science
Expected May 2022 | Mumbai, India
Current Major GPA: 8.7 / 10.0

SKILLS

PROGRAMMING
Python • C/C++ • SQL • VBA
Java • Solidity • Julia • R
HTML • JavaScript • CSS •
Matlab/Octave • G-Code

SOFTWARE
Git/Github • LaTeX • SolidWorks
AutoCAD • Ansys CFD • MS Office

LANGUAGES SPOKEN
English • Hindi • Marathi • Tamil

KEY STRENGTHS
Quick learner • Flexible • Adaptable
Strong communication, interpersonal and leadership skills

COURSEWORK

COMPUTER SCIENCE
Machine Learning
Deep Learning
Introduction to Algorithms
Data Science

OTHERS
Ordinary Differential Equations
(Teaching Assistant)
Engineering Drawing and Graphics
(Teaching Assistant)
Introduction to Stochastic Processes
Mathematical Structures for Control
Convex Optimization
Numerical Analysis
Economics

ACCOMPLISHMENTS

JEE (M) 2018 - **All India Rank 134**
JEE (A) 2018 - **All India Rank 511**
KVPY Scholar 2016
Represented India at the **World Scrabble Championships 2019**
Times Spark Scholar 2016