Bhargav Yagnik

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I am a Graduate Student in Applied Computer Science at Concordia University. Hard-working professional focused on developing interesting Applications using AI and Data Science. Seeking opportunities that hone my skills.

Experience

SCAAI - Symbiosis Centre for Applied AI

Research Assistant — Jun 2020 - Jun 2021

- Worked on various applications in AI under the guidance Dr Rahee Walambe and Dr Ketan Kotecha.
- Implemented Time series forecasting for covid cases using for Government of Maharashtra [Jun 2020-Sept 2020] created an interactive Flask application or visualization and prediction using SARIMA and Prophet algorithms and Chart.js.
- Mentored and Assisted a research work on the classification of titanium alloys to pure metals using their thermal properties. Compared ML models like Decision Tree, Random Forest, SVM, ANN with multilayer perceptrons.
- A Domain Adaptation project in NLP using Domain Adversarial Neural Network (DANN) for Feature Generalization for misinformation detection and Local Interpretable Model-Agnostic Explanations (LIME) for model interpretation. Submitted to Information Processing and Management, Elsevier.
- Learnt and worked on libraries like - Pytorch, Tensorflow, NLTK, Sklearn, Keras, Seaborn, Matplotlib, Statsmodel, Pandas.

Research Intern — Jan 2020 - May 2020

- Created a dataset for Hate speech detection in Hinglish Language using custom web-scrapers and Developed a pipeline specific to Hate speech detection in Hinglish and achieved state-of-the-art results using BERT, ELMO and FLAIR. Presented the same work at the International Conference on Advances and Applications of Artificial Intelligence and Machine Learning - ICAAAIML2021.
- Wrote a White paper on “Ethics in AI” and submitted it to TechMahindra as a part of their competition.
- Placed 3rd in Syngenta hackathon where we implemented a Computer Vision project in 24 hours that could be accessed using a mobile phone for detection.

Education

Concordia University

Masters of Applied Computer Science, 3.5 — Sep 2021 - Apr 2023

SIT- Symbiosis Institute of Technology

Bachelor of Technology - BTech, 8.33 — Jun 2017 - Apr 2021

Projects

Customer Segmentation

Customer Segmentation in R

- Created customer segmentation and Prediction model for customers based on Spending score in the mall. Achieved RMSE of 22.12 for test sample.
- Technologies used : R , Plotly, Caret.

RedditLytics

Reddit based Full-stack reactive web-application — github.com/bhargavyagnik/redditanalytics

- Built a stand-alone application using Java Play Framework that accessed data from Reddit data using Pushshift API and processed in streams.
- Implemented reactive server-push using AKKA actors so that if could run dynamically.
- Technologies used Java, Java Streams, PLAY, AKKA.

YELP Analyzer

YELP Analyzer using Azure Databricks and PowerBI

- Generated a dashboard in PowerBi to visualize various business questions using YELP dataset.
- Leverage Azure Databricks to compute queries on 10.9GB dataset.
- Technologies used : Azure Cloud, Databricks, PowerBI, PySpark, SQL.

GSEB Result assistant

A web-scraper for obtaining class results in seconds — github.com/bhargavyagnik/GSEB-School-result-assistant

- Helped "JMP Gopalak School, Gandhinagar" extract results of more than 200 students in grade 10, 12 using a web-scraper. Improved the process time to mere 10 seconds which previously was done manually for each students and took more than a day for the school.
- Technologies used - Python, Selenium, Beautiful-Soup, Pandas, Numpy.

GRE Flashcard

A Vocabulary support tool for GRE preparation — www.bhargavyagnik.ml/GRE-Flashcards/

- Designed and Developed a web-based application for memorizing tough GRE words and improving vocabulary for students. It used web-caching to store the words learnt and help students memorize more than 2000 words.
- Technologies Implemented : Javascript, Github, HTML5, CSS, Jquery.

Tweet-sent

A Realtime Twitter Sentiment Analysis Dashboard — github.com/bhargavyagnik/Realtime-Twitter-Sentiment

- Created a Flask based dashboard to implement a NLP-sentiment classifier that updated in realtime various sentiments of the tweets on a specific topic.
- TensorFlow - Keras , NLTK, Flask, Tweepy, Matplotlib, WordCloud, Scikit Learn, Pandas, Numpy.

Face Mask Detection

Quick face-mask detection application — github.com/bhargavyagnik/FaceMaskDetection

- Implemented a Face-mask detection application using Deep Learning and Computer vision on a web-cam in real-time with 99.9% accuracy.
- Technologies used - Python, OpenCv, Tensorflow.

Piano Tiles Hacker

A Computer Vision based Piano Tiles player. — www.youtube.com/watch?v=t8zSDAEFgh8

- A Computer Vision-based auto-controlled player that could detect tiles and play the game at in-human speeds with decisions taken in milliseconds.
- Technologies used - Python, OpenCV, PyAutoGUI.

Sudoku Solver

A Computer Vision based Sudoku solver — github.com/bhargavyagnik/Sudoku

- Created a real-time Sudoku solver using Computer Vision and Neural Networks. Where the used could point a newspaper Sudoku on the web-cam and the machine could give the solution in seconds.
- Technologies used: Python, OpenCV, Keras, Numpy.

Andhadhun

Computer Accessibility application — github.com/bhargavyagnik/Andhadhun

- Accessibility application that works as an overlay in windows and helps in controlling the PC with hand gestures or voice commands.
- Technologies used: Python, OpenCV, Google Text-to-Speech, PyQT.

GOT Monopoly

Monopoly game but Game of Thrones theme — github.com/bhargavyagnik/Game-of-Thrones-Monopoly

- Created a Game-of-Thrones monopoly game from scratch in Java that had custom board, players, videos etc. That made it an immersive video game experience.
- Technologies used : Java, JavaFx.

RobinHood

Android Application for Cloth Donation — github.com/bhargavyagnik/Robinhood

- Developed an Android Application for cloth donation where users could generate old clothes and NGO's could register themselves for receiving the support. The real-time data went into Firebase and could be managed easily on the dashboard.
- Designed the UI-UX of the application.
- Technologies used : Android, Firebase, Photoshop, Adobe XD.

Organizing committee member
Volunteer at Techela

- Volunteered in various roles to help the Computer Science department organized the annual Techfest termed Techela.
- Helped to install various software necessary for the events as well as captured moments on the day of the fest as a Photography team member.

App Developer
Volunteer at Giants peoples Foundation

- Developed an application for cloth donation that would help NGO to collect old clothes and distribute to the needy.
- Desgined and ideated the plan for the website of the NGO that could attract more volunteers and better platform to advertise the projects undertaken by the organization.

AI Chess

A min-max based 1vs Computer Chess game github.com/bhargavyagnik/Eulers-Chess

- Implemented Min-max algorithm with depth-first search that could compete easily upto a Level 10 Stockfish engine.
- Technologies used : Python, Pygame.

Tic Tac Toe

A C++ game for Tic Tac Toe github.com/bhargavyagnik/tictactoe

- Programmed a 2 player TicTacToe game in C++ using the Graphics library in C++.

Gamezone

Multi game zone based in C++ github.com/bhargavyagnik/cppgamezone

- Developed multiple games like GK Quiz, Hangman with multiple levels and an admin panel for managing the quiz questions etc.

Independent Coursework

AI and Machine Learning, Deep Learning, Deeplearning.AI TensorFlow Developer, Six Sigma Yellow Belt, Architecting with Google Compute Engine.

Peer-Reviewed Conference and Journal Papers

- **"***Explainable Misinformation Detection Across Multiple Social Media Platforms***",** Rahee Walambe, Ananya Srivastava, Bhargav Yagnik, Mohammed Hasan, Ketan Kotecha, Gargi Joshi, Information Processing and Management, Elsevier, 2022.
- "*Materials for Aerospace Applications: Machine Learning Methods for Titanium Alloys Classification*". Meena Laad, Rahee Walambe, Ketan Kotecha, Bhargav Yagnik, Varad Nerlekar, Nishita Agarwal. In the IAA/AAS Conference on Space Structures and Materials, proceedings published in AAS Advances in the Astronautical Sciences series by Univelt, Inc., San Diego, CA, USA.
- *"Role of AI in Detection of Hateful Speech for Hinglish Data on Social Media".* Bhargav Yagnik, Ananya Srivastava, Mohammed Hasan, Rahee Walambe, Ketan Kotecha. At the International Conference on Advances and Applications of Artificial Intelligence and Machine Learning 2020, proceedings in Lecture Notes in Electrical Engineering, Springer. (2 citations)

Honors and Awards

- Scholarship: Academic Performance, Sem 6, Symbiosis Institute of Technology, India: July 2020.

Volunteer Experience:

- Actively participated and volunteered in events organized by social service Club – Varsity Care. (2019)
- Lead and Managed the Photography team of Annual College Festival as well as volunteered for multiple positions in various events organized at the University.

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