Yash Bafna

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Education

- **Brown University** — Providence, RI
  Master of Science, Computer Science; ***GPA: 3.8****/4.0* — *Aug 2021 – May 2023*
  - **Relevant Coursework** - Computer Vision, Data Science, Data & Society, Deep Learning, Human Computer Interaction, Machine Learning, Probability & Statistics, Statistical Learning, User Interfaces and User Experiences
- **University of Mumbai** — Mumbai, India
  Bachelor of Engineering, Computer Engineering; ***GPA: 8.8****/10.0* — *Aug 2017 – May 2021*
  - **Relevant Coursework** - Algorithms, Applied Mathematics, Artificial Intelligence & Soft Computing, Big Data Analytics, Computer Graphics, Computer Networks, Computer Organization & Architecture, Database Management System, Data Structures, Data Warehousing & Mining, Discrete Structures, Information Systems, Machine Learning, Microprocessors

Technical Skills

- **Programming Languages**: C, C#, CSS, HTML, Java, JavaScript, Julia, Php, Python, R, React
- **Tools & Technologies**: Asp.net, Flask, Flutter, Git, Jenkins, Jira, Kafka, MySQL, Postman, Swagger
- **Machine Learning Libraries**: Keras, Matplotlib, NumPy, OpenCV, Pandas, Scikit-Learn, TensorFlow

Work Experience

- **Tesla** — Fremont, CA
  Software Development Engineering Intern — *May 2022 - Aug 2022*
  - Full-stack developer for the IT Applications team, responsible for building a payment collection application to track various payment collection forms for all the products and services offered
  - Added support for new states and countries of operation by creating new workflows into the existing system
  - Modified the energy division's payment application's workflow to use more inheritance and tweaked the database architecture to remove any unwanted and duplicate results to in-turn decrease computational costs
- **PDB Technologies and Solutions** — Pune, India
  Data Science Intern — *Jun 2020 - Aug 2020*
  - Conceptualized and developed a chatbot for the organisation applying Deep Learning techniques
  - Incorporated the Feed-Forward Neural Network model to classify the category of user's message and give an appropriate response from the enlisted responses
  - Designed the front end using Tkinter library to enable getting input messages from the user and displaying appropriate responses generated by the bot
- **Reliance Jio Infocomm** — Mumbai, India
  Big Data Analytics and Machine Learning Intern — *Jun 2019 - Jul 2019*
  - Performed web scrapping of customer reviews about products and services offered by the company from popular websites, applied Natural Language Processing and Sentiment Analysis and created Word Clouds
  - Programmed an HR Attrition prediction model employing Random Forest Classifier to help the management understand how successfully the company is in retaining their employees
  - Evaluated Customer Churn prediction using Random Forest Classifier to understand the percentage of customers abandoning the company's products and services

Research and Project Work

- **Acuity** | *Student Attentiveness Monitoring System*
  - Engineered an automated analytic system to monitor and classify students' attention during online lectures and generate a detailed report for the instructor
  - Incorporated Convolutional Neural Network model with CAFFE framework for accurate face detection and CSRT tracker to track and derive the students' head displacement
  - Published the paper in International Research Journal of Engineering and Technology (IRJET) Vol 8, Issue 7, Jul 2021 S.No: 25
- **Maze Solver** | *Finding Shortest Path In A Maze*
  - Developed a CLI application that takes an image of a maze as input and generates the shortest path solution for it
  - Implemented path finding algorithms such as Dijkstra, A* and Meet-in-the-Middle to find and visualize shortest possible path in less than a second
- **Heart Health** | *Heart Disease Prediction*
  - Developed a classification based heart disease prediction model incorporating Machine Learning models such as Support Vector Classifier, Random Forest and Decision Trees
  - Computed global and local feature importance were computed for the best model using the permutation technique, coefficient technique and SHAP.