Yash Rajabhau Vibhute

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EDUCATION

Master of Science in Computer Science, Indiana University Bloomington — 08/2022 - 05/2024
Luddy School of Informatics, Computing, and Engineering **(GPA: 3.9/4)** — Indiana, USA

Bachelor of Engineering in Computer Engineering, Savitribai Phule Pune University — 06/2018 - 05/2022
Pimpri Chinchwad College of Engineering, Pune **(CGPA: 9.44/10)** — Pune, India

WORK EXPERIENCE

Data Scientist, Project 990 Inc. — 02/2024 - Present, Indiana, USA
- Coordinated data extraction and analysis for Project990, utilizing natural language processing techniques to map the U.S. nonprofit sector's funding landscape.
- Leveraged supercomputers like BigRed200 to process and analyze vast datasets, contributing to the development of a comprehensive foundation-grantee network.

Associate Instructor, Indiana University Bloomington — 08/2022 - 05/2024, Indiana, USA
- Aided professors to deliver 60+ engaging lectures, lab sessions and facilitate 30+ discussions on Applied Machine Learning, Data Mining and Big Data, and Software Engineering Courses, reaching 400+ students.
- Advised complete academic assistance, including individualized guidance, review/grading sessions, and assignment marking, to enable students to achieve academic excellence.

Software Engineer Intern *(Full Stack Web Developer),* Sadhichi Wear Pvt. Ltd. — 02/2021 - 01/2022, Pune, India
- Developed interactive web apps using ReactJS & NodeJS, ensuring seamless data management with SQL & Firebase.
- Coordinated with senior engineers to enhance performance, resulting in a 30% increase in total application speed.
- Performed web-based automated testing with Selenium, achieving a 95% test coverage.

PUBLICATIONS

Brain Tumor Image Enhancement Using Blending of Contrast Enhancement Techniques — 05/2022
- Innovated a unique approach for enhancing brain tumor MRI images, blending state-of-the-art algorithms including BBHE, DSIHE, CLAHE, RESIHE, and MSRCR evaluated on factors like NIQE, PIQE, BRISQUE and Entropy. *(Springer – 3rd ICIPCN 22)*
- Achieved significant success with the CLAHE + MSRCR combination, resulting in superior image enhancement and enhanced tumor visibility, as evidenced by a BRISQUE value of 29.805718

Empirical Study of Early Breast Cancer Detection using Machine Learning Techniques — 07/2021
- Conducted a comprehensive review on early breast cancer detection techniques, while focusing on the effectiveness of machine learning prediction algorithms such as Support Vector Machine, Fuzzy C-Means, Random Forest, Decision Tree, Naive Bayes, and Deep Learning Algorithms (Convolutional Neural Network), utilizing the Wisconsin feature based dataset for experimentation based on K-Fold Cross Validation methods with an overall accuracy rate of 95.61% *(Springer- 3rd ICICCS 21)*

PROJECTS

BeatBuddy (Music Recommendation System) — 05/2023
- Incorporated PRAW, BeautifulSoup, and APIs from Spotify, Twitter, and Last.fm for data scraping, performed data analysis by cleaning and processing the gathered data ranging around 100k+ rows and 20 features.
- On processed data, implemented sentiment analysis by Natural Language Processing, content-based filtering (cosine similarity) & hosted on AWS EC2, utilizing K-means for efficient grouping of music items based on user behavior.

Psychological Disorder Predictor and Consultor (Disorder Prediction and Consulting System) — 04/2023
- Achieved an 89% accuracy rate in predicting disorders by formulating a binary dataset and employing advanced machine learning models (Random Forest, Decision Tree).
- Incepted a Tkinter-based software tool for symptom analysis and doctor recommendations, enhancing healthcare accessibility.

Smart Wastewater Reclamation (Wastewater Treatment Plant Management System) — 07/2021
- Led a 5-member team, aiming for a 60% reduction in reliance on government oversight and facilitating real-time monitoring and management of wastewater quality by hosting the system online using Streamlit and Firebase.
- Engineered a binary data representation and employed machine learning algorithms such as random forest and decision trees to predict wastewater purity with 90.6% accuracy.

HanabiYuga (Event Management System) — 11/2020
- Spearheaded a team of 4 to create an event management app by Agile method, allowing users to search and book events.
- Executed tools for hosts to oversee events and chat functionality, resulting in a 20% increase in user engagement.
- Incorporated SMTP for notifications and leveraged OAuth to guarantee ironclad security during authentication.

AWARDS

- **Winner** (*OnCampus Level*), **Finalist, IdeaIn10 Presentation Competition Round** (Pune)**, United Kingdom** *for Smart Wastewater Reclamation* — 12/2021
- **Finalist, Tech Infusion Grand Challenge, Australia** *for Smart Wastewater Reclamation* — 09/2021

SKILLS

- **Programming Languages:** C (OOP), C++, Python, Java, R Programming (Basics)
- **Web Technologies:** HTML, CSS, ReactJS, JavaScript, jQuery, Bootstrap, XML
- **Database:** RDBMS, MySQL, MongoDB, Firebase, Neo4j, PHP
- **Additional:** Android Studios, Matlab, Flask, Docker, RESTful APIs, Apache, AWS, EC2, Git, JIRA, Azure, Postman, Statistics