Sejal Vasudev

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Education

PES University 2021-2025
BTech CSE *Current CGPA: 7.92*
Nehru Smaraka Vidyalaya 2019-2021
12th Grade *Percentage: 89%*
Sophia High School 2005-2019
10th Grade *Percentage: 96%*

Experience

Intern Python Developer July 2023
LiRCTek Technologies

- Developed efficient PDF parsing using Python and data structures to convert PDFs into JSON.
- Utilized regex and dataframes to extract and manipulate critical data.
- Conducted integration testing with Thunderclient for backend-frontend interaction.
- Strengthened application stability through debugging and issue resolution.

IEEE Research Intern June - July 2023
IEEE Computer Society Bangalore Chapter

- Co-authored a paper on regression algorithms for mental fitness prediction.
- Analyzed mental health indicators using machine learning algorithms.
- Aimed for early detection of mental health issues and optimizing healthcare resources.

Projects

Stock Market Prediction | *Python, Pandas, NumPy, scikit-learn*

- Developed a model to forecast stock prices using machine learning algorithms.
- Utilized time series analysis and regression models, evaluated with SMAPE.
- Implemented a decision system for Buy, Hold, or Sell strategies.

VitalFit - Activewear E-commerce Website | *TypeScript, MongoDB, React, Node.js, Express.js*

- Developed an e-commerce platform for an activewear brand using MERN Stack.
- Implemented responsive product pages, shopping cart, and checkout functionalities.
- Created a RESTful API for product management, user authentication, and order processing.
- Deployed the application on a cloud server for scalable and reliable access.

Performance Analysis of Long Jump Athletes Using 2D Image Processing | *Python, OpenCV, MediaPipe, NumPy, scikit-learn*

- Analyzed long jump performances using video footage and image processing to assist coaches in improving athlete techniques.
- Developed and labeled a dataset from recorded long jump videos.
- Utilized object detection and classification to track athlete movements, focusing on key parameters such as take-off angle, speed of run-up before take-off, jump trajectory, jump distance, and length of last 3 strides.
- Employed MediaPipe for human detection and feature extraction, and integrated machine learning models for performance enhancement.

IEEE Publication

Statistical Analysis of Regression Algorithms for Mental Health Fitness Prediction | *Python, NumPy, Pandas, scikit-learn*

- Led a study using various machine learning algorithms to predict mental health fitness levels, leveraging a comprehensive dataset. Achieved a high R^2 score of 99.93%.
- Conducted thorough analysis and provided insights into key mental health conditions and their prevalence.

Technical Skills

Languages: C, C++, Python, JavaScript, SQL, HTML/CSS, R
Frameworks and Tools: React, Pandas, NumPy, scikit-learn, TensorFlow, PyTorch, Matplotlib, Seaborn, Git, Docker, Kubernetes, Thunderclient, VS Code, Jupyter Notebook
Technologies: Machine Learning, Data Analysis, Distributed Systems, Cloud Computing, Linux/Unix

Courses and Certifications

B.A Beginner's Guide to Linux Kernel Development (LFD103), Cloud Computing with GCP, Jira Work Management Fundamentals, Object-Oriented Programming with C++, Entrepreneurship Fundamentals

Positions of Responsibility

- Enactus PESU (Social Entrepreneurship Club) - Marketing Team Core Member
- Aikya PESU (CSR + Entrepreneurship Club) - Head of Event Management Domain
- Aatmatrisha (Flagship Techno-Cultural Fest of PESU) - Volunteer, Organizer, Core Team Member (3 years)