Rajkanwar Singh

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PROJECTS

Diabetes Prediction System | 08/2023
- Cleaned and analyzed Early stage diabetes risk prediction dataset with 520 instances and 17 attributes
- Tested 4 ML algorithms with various encoding techniques
- Applied RandomForest Classifier with 99% accuracy for predictions.
- Integrated the system into a React app with FastAPI within 24 hours

VFC Website | 07/2023
- Created a frontend-only website on GitHub Pages for business plan competitions within 4 hours
- Added Weather Broadcast & Govt. Schemes page for farmer convenience, attracting 50% more visits.
- Technology Stack: HTML, CSS, JavaScript

Starbucks Beverage Recommendation System | 06/2023
- Cleaned and analyzed Starbucks Beverage Nutrients dataset with 242 entries.
- Applied RandomForest Classifier with 75% accuracy for beverage recommendations.
- Integrated the system into a React app with FastAPI within 24 hours

SPSRS: Smart Package Sorting and Retrieval System | 01/2023 - 05/2023
- Designed an automated package handling system using machine vision and a robotic arm, reducing package handling time by 40%.
- Integrated geared motors and camera-based OCR for efficient package identification, achieving an accuracy rate of 75%.
- Implemented RFID sensors for one-tap package retrieval, resulting in a 80% reduction in manual intervention.
- Technology Stack: Machine Vision, Robotics, RFID

Home Assistant Server with Frigate NVR on an Old Intel x86 Laptop | 08/2022
- Repurposed an old Intel x86 laptop into a home assistant server, reducing hardware costs by 80%.
- Installed Linux, Docker, and Frigate NVR for CCTV object detection.
- Monitored Docker containers and resources using Portainer, improving system performance by 30%.
- Technology Stack: Linux, Docker, Frigate NVR

CRAFT: Certificate Registration and Verification Tool | 06/2022
- Developed a certificate generation and verification system using Google Sheets and Apps Script, reducing certificate processing time by 70%.
- Automated certificate management and verification processes, resulting in a 90% reduction in manual effort.
- Collaborated with MCM DAV College, Chd for successful implementation, delivering e-certificates to 500+ recipients.
- Achieved 100% on-time delivery of e-certificates, ensuring a seamless and efficient certificate management system.

RESEARCH & PUBLICATIONS

Reinforcement Learning Approach in Supply Chain Management: A Review. *Modern Trends in Machine Learning: Issues and Challenges.* SCRIVENER PUBLISHING & WILEY. 2023 (in press)

EDUCATION

VIT-AP University
B.Tech Computer Science and Engineering | 07/2025

CERTIFICATES

- Machine Learning Training by Boston Training Academy powered by Intel® Software Applied Data Science by IBM
- Python 101 for Data Science by IBM
- R 101 for Data Science by IBM
- Introduction to Computer Science and Programming Using Python by MITx

CO-CURRICULARS

ACM Student Chapter VIT AP
External Affairs Lead | 08/2022 - Present
- Inviting resource persons and companies and conducting over 10 pro bono events/sessions
- Created a process to automate report generation of events conducted by over 75 fellow clubs and chapters for improving internal processes cutting down manual work by over 50%
- Collaborated with 5 other clubs of the University to conduct events

ACM Student Chapter VIT AP
External Affairs Executive | 09/2021 - 08/2022
- Automated performance evaluations of chapter members reducing manual work by 95% and helping 3 departments Prepared an annual report for the chapter
- Reported 5 likely/potential collaborations with various companies

VIT-AP SCHOOL OF BUSINESS (VSB)
Event Student Coordinator | 10/2022
- Industrial Guest Talk on "Entrepreneurial Journey: Start-up to Success"
- Invited and scheduled guest talk with Mr. Aman Goel Co-founder, Cogno AI a $1.5 Million AI-Led Enterprise Communications Startup
- Formed and managed a team of 7 students working on various tasks for the event
- Moderated the online MS Teams event with over 300 participants

HACKATHONS & COMPETITIONS

3rd Position in VLaunchPad Annual National Business Plan Competition for Agritech Innovation | 01/2023
- Issued by VSB in collaboration with VTBIF and Institute's Innovation Council (IC)
- Competing with 425+ teams, prepared and presented a detailed business plan for Vertical Farming Company with preliminary research adding critical points to India-specific needs and implementation: detailed financial feasibility and future projections.

Finalist in HACK-23 International Hackathon for Sustainable Innovation | 07/2023
- Issued by The American University in Cairo. Organised by The American University in Cairo, School of Business, Center for Entrepreneurship and Innovation (CEI), Etisalat Misr, EBank and Fintech Egypt

SKILLS

Programming Languages: Python, Java, R, YAML
Machine Learning Frameworks: TensorFlow, PyTorch, scikit-learn
Virtualisation: Docker
Databases: MySQL
Cloud Computing: AWS
Office Skills: Microsoft-suite, Google workspace
Soft skills: Communication, Leadership, Analysis, Writing