Arin Balyan

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Bachelors of Technology

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EDUCATION

•Bachelor of Technology in Computer Science and Engineering(AIML)

2022-26

CGPA: 8.21

Vellore Institute of technology, Bhopal

PROJECTS

•AgroAid: A comprehensive farming assistant

A One stop solution for Farmners for their needs like crop recommendation, Yield Prediction and many more.

- Developing a farming support system with crop yield prediction (trained on 1M+ data points) and a crop recommendation model with 95% accuracy.
- Integrating a multilingual voice assistant to increase accessibility for farmers in rural areas.
- Building an interactive forum where 500+ farmers can share crop-growing techniques and best practices.
- Using machine learning models for predictive analytics, providing actionable insights to optimize farming efficiency.
- Designing a scalable system with a user-friendly interface for easy adoption by farmers.

•Traffic Flow Prediction

A Traffic flow prediction model using LSTMs able to accurately predict the traffic flow at 15 minute intervals.

- Developed a traffic flow prediction model using LSTM neural networks, achieving 93% accuracy.
- Trained the model on spatio-temporal data from 36 sensor locations, recorded at 15-minute intervals.
- Implemented time-series forecasting techniques to predict traffic congestion patterns, aiding in traffic management.
- Conducted extensive model evaluation to enhance predictive performance, reducing mean absolute error (MAE) significantly.
- Developed as part of a research study, though the paper was not published.

•TrueVoice – Decentralized Feedback System

 $Block chain-based\ feedback\ platform\ with\ immutable,\ transparent\ feedback\ records$

- Implemented a custom blockchain using SHA256 hashing and proof-of-work to guarantee feedback immutability and data integrity.
- Built RESTful APIs with Node.js and Express.js for feedback submission, request management, and response collection, streamlining front-end interactions.
- Designed a responsive HTML/CSS/JavaScript dashboard featuring real-time updates, filtering, and analytics to track feedback activities and request statuses.

Work History

•GirlScript Summer of Code – Contributor

October 2024

Remote

- Selected as an open-source contributor among national applicants for GSSoC 2025.
- Participated and contributed to open source projects via Github.

CERTIFICATES

•Applied Machine Learning in Python (University of Michigan, Coursera)

Score:~93.69%

•Ethnus MERN Full-stack Developer Certification (Ethnus)

90%

•IBM Blockchain Develoer Certification Program (IBM)

TECHNICAL SKILLS AND INTERESTS

Languages: C/C++, Python, JavaScript, SQL

Libraries: C++ STL, NumPy, Pandas

Web Dev Tools: Node.is, VS Code, Git, GitHub, Postman, ESLint, Nodemon

Frameworks: React.js, Express.js, Django, Flask

Cloud/Databases: MongoDB, Firebase, MySQL, PostgreSQL

Relevent Coursework: Data Structures & Algorithms, Operating Systems, Object Oriented Programming, Database

Management System, Software Engineering.

Areas of Interest: Machine Learning, Data Analysis, Web Development

Soft Skills: Leadership, Problem Solving, Self-learning, Presentation, Adaptability, Empathy, Time Management,

Creativity, Citical Thinking, Teamwork, Emotional Intelligence, Communication