Varsha Balaji

Portfolio | GitHub | LinkedIn
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EDUCATION

SSN COLLEGE OF ENGINEERING | Bachelor of Engineering in Computer Science
2020-2024 | Chennai, India
CGPA: 8.87

MAHARISHI VIDYA MANDIR | PCM with Computer Science
2016-2020 | Chennai, India
Class 12 CBSE : 94.6%

COURSEWORK

UNDERGRADUATE
Data Structures
Object Oriented Programming
Operating Systems
Design and Analysis of Algorithms
Database Management Systems
Software Engineering
Artificial intelligence
Introduction to Machine learning
Foundation of Data Science
Mobile Computing
Distributed Systems

CERTIFICATIONS

Stanford- Neural Networks & Deep Learning(Ongoing)

IBM- AI Workflow: Machine Learning, Visual Recognition and NLP

Great Learning: Data Science Foundations

NPTEL: Programming in Modern C++

SKILLS

PROGRAMMING
Languages:
Advanced: Java • Python • SQL
Intermediate: C • C++ • LaTeX • HTML CSS
Basic: Javascript
Tools:
Git • Google Colab • Jupyter Notebook
Android Studio
Frameworks & Libraries:
Scikit-learn • Pandas • Numpy
Matplotlib • TensorFlow • OpenCV
Technologies:
MySQL • MongoDB

EXPERIENCE

SYNERGY MARITIME | Data Science Intern
July 2022 - August 2022 | Chennai, India
- Worked with the data science team on ML-driven virtual sensor in "Scrubber Management" using regression models.
- Implemented advanced data preprocessing techniques and leveraged model hyperparameter tuning, resulting in a substantial accuracy improvement from 0.60 to 0.85, marking a 25% enhancement.

PROJECTS

RENAL STONE DETECTION | Neural Networks
October 2022 – July 2023
- Led a team in developing neural network models like DenseNet, and ResNet using deep learning techniques for renal stone detection.
- Achieved optimized accuracy through data augmentation, increased epochs in training, and effectively reduced overfitting by 86% from 78%.

VOIDVOICES WEB APPLICATION | KLA Hackathon
February 2023
- Headed the creation of a web application that enhances accessibility by converting sign language and braille to text, revolutionizing communication for differently-abled individuals.
- Employed deep learning techniques with OpenCV and TensorFlow for gesture recognition and Javascript for Braille conversion.

AWARDS & LEADERSHIP

Year	Award	Role / Event
2023	SSN technical symposium	Event Head - DataWhiz (Data Analytics Event)
2023	2nd Runner Up	All Girls KLA Hackathon
2023	College	Dance Team Head
2022	Top 3/100	Best project of National BigData Workshop
2021	Core committee member	Sales & Marketing team SSN Entrepreneur Cell

PUBLICATIONS

[1] V. Balaji, B. Bharathi, et al. Nlp_ssn_cse@ dravidianlangtech: Fake news detection in dravidian languages using transformer models. In *Proceedings of the Third Workshop on Speech and Language Technologies for Dravidian Languages*, pages 133–139, 2023.

[2] V. Balaji, A. Jp, and B. Bharathi. Cse_speech@ lt-edi-2023automatic speech recognition vulnerable old-aged and transgender people in tamil. In *Proceedings of the Third Workshop on Language Technology for Equality, Diversity and Inclusion*, pages 204–208, 2023.

[3] V. Balaji, A. Kannan, A. Balaji, and B. B. Singh. Nlp_ssn_cse at hope2023@ iberlef: Multilingual hope speech detection using machine learning algorithms. 2023.