Harshitha Prakash

Aspiring software engineer with a strong foundation in computer science, seeking to leverage my skills in machine learning, big data, and software development to contribute to innovative projects and solve complex problems in a dynamic organisation.

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Skills

C C++ Java Python JavaScript HTML CSS React APIs AWS Git GitHub

Education

The University of Adelaide
Jul 2023 - Jul 2025

Master of Computer Science
GPA: 5.85/7.0
Relevant Coursework: Applied Machine Learning, Event-Driven Computing, Applied Natural Language Processing, Mining Big Data, Software Process Improvement, Search-Based Software Engineering

Nitte Meenakshi Institute of Technology
Jun 2019 - Jun 2023

Bachelor of Computer Science
GPA: 9.21/10.0
Relevant Coursework: Data Structures and Algorithms, Object-Oriented Programming, Database Management Systems, Operating Systems, Computer Networks

Work Experiences

The University of Adelaide
Jul 2024 - Current

Teaching Assistant
- Conducting weekly workshop/ practical sessions for undergraduate students in Object Oriented Programming, Secure Programming, Problem Solving & Software Development, Introduction to Computer Systems, Networks, and Security courses.

Bharat Electronics Limited
Sep 2022 - Oct 2022

Software Development Intern
- Spearheaded the development of a feature to streamline UART settings configuration, enhancing efficiency for 1,000 users and reducing system lag by 20%.
- Collaborated with cross-functional teams to deliver projects on time, improving user satisfaction by 15%.

Projects

Petri Net Modelling of Railway Networks

Java

- Engineered a comprehensive Petri Net model using Java and JUnit to manage concurrent events in a complex rail yard system, ensuring 100% safe and efficient train operations.
- Designed a detailed diagram along with the working code representing the rail network, including 11 sections, passenger and freight lines, and multiple junctions, to visualize the system architecture.

Text Classification and Sentiment Analysis of Hotel Reviews

Python

- Developed a sentiment analysis model using NLP techniques and machine learning algorithms, achieving 90.5% accuracy.
- Utilized Python, Scikit-learn, and NLTK to preprocess data, extract features, and train the model, improving sentiment classification by 25%.

Obesity Prediction

PySpark

- Built regression and classification models using PySpark to predict obesity based on health indicators for 10,000 individuals.
- Achieved 94.48% accuracy with logistic regression and 93.97% with random forest classifier, outperforming baseline models by 15%.

Publication

Deep Learning approaches for Automated Detection of Fake Indian Banknotes

Publisher: IEEE

- Introduced a novel deep learning-based method using CNNs and RNNs for accurate counterfeit banknote detection.
- Created an ensemble model to analyze image and security features, outperforming traditional methods by 20%.
- Demonstrated potential for integration into existing systems to enhance banknote security against counterfeiting.

Community Involvement

Children's University

Apr 2024 - Current

Volunteer

- Mentor and guide children during their graduation ceremony, ensuring their safety and well-being while nurturing a passion for discovery.
- Collaborate with 15 volunteers to design and deliver workshops for 200 children aged 7-14, increasing engagement by 30%.

Competitive Programming Club

Aug 2023 - Current

Club Member

- Participate in programming competitions such as ANZAC, LeetCode, and ICPC, honing problem-solving skills and collaborating with a community of 50 coding enthusiasts.
- Secured Top 10% ranking in the ANZAC competitive programming competition, demonstrating strong algorithmic thinking and coding abilities under pressure