

SRINIVASAN POONKUNDRAN

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EDUCATION

University of Arizona
Masters in Data Science

Jan '24 – Dec '25
4 GPA

A.I.S.S.M.S. College of Engineering, Savitribai Phule Pune University, Pune
Bachelor of Engineering, Computer

Aug '17 – May '21
3.39 GPA

PROJECTS

Heart Rate Monitoring System

2024

- Designed and implemented a low-cost IoT-enabled web application to monitor heart rate and blood oxygen levels.
- Developed the server using Node.js, Express, and MongoDB, implementing RESTful APIs for secure data transmission and device management.
- Built a responsive front-end application using React to visualize data with real-time charts for daily and weekly summaries.
- Integrated MAX30102 heart rate and oxygen sensor with IoT device using Photon development board; implemented synchronous state machines for data collection and transmission.
- Enabled configurable measurement intervals and times, allowing users to define when and how often data should be captured.
- Ensured offline data storage for the IoT device and automatic synchronization once Wi-Fi connection was re-established.

Cricket Match Result Forecasting

2024

- Designed and executed a Random Forest Classifier, achieving 87% accuracy in predicting ODI match outcomes, player performances, and key events.
- Developed a real-time dashboard simulating live match updates, integrating dynamically changing variables with predictions updated every 5 minutes.
- Built backend APIs to deliver "live" match statistics by simulating live data using pre-existing datasets, ensuring accurate and timely insights.
- Enhanced user engagement by providing interactive and continuously evolving predictions for cricket fans during match simulations.

Cricket Metrics

2024

- Developed a dynamic cricket analytics dashboard to visualize match statistics and player performances using extensive historical datasets (150,000+ rows).
- Simulated live matches by creating backend APIs integrated with a front-end Quarto interface, enabling automatic updates and real-time data rendering.
- Designed and implemented data visualizations, including line charts, bar charts, donut charts, and map plots, to provide insights into player performance, scoring trends, partnerships, and bowling economy rates.
- Built APIs for key match dynamics such as Batting Performance, Bowling Performance, and Partnerships, ensuring seamless live updates and in-depth analysis for end users.

Psychometric Analysis

2024

- Conducted an extensive psychometric analysis of 890 fictional characters from 100 universes using data from the Open-Source Psychometrics Project.
- Merged datasets on character traits, Myers-Briggs personality types, and psychometric evaluations to explore correlations between personality profiles and character notability.
- Performed data cleaning, transformation, and feature engineering to identify key personality traits and their influence on character appeal.
- Visualized personality distributions, match percentages, and character notability using bar charts, density plots, and radar charts, providing insights into audience engagement.
- Investigated correlations between traits and Myers-Briggs types, uncovering patterns in likability and audience perception, offering valuable insights into the psychological profiles of popular fictional characters.

COVID -19 Protocol Monitoring System

2021

- Developed an innovative surveillance system to mitigate COVID-19 spread by integrating mask detection, social distance monitoring, and temperature sensing using Socket programming, Raspberry Pi Pico/Arduino Uno, and CCTV cameras.
- Designed a CNN-based mask detection model with 99% accuracy on a dataset of 3,500 samples.
- Built a scalable client-server architecture to enable efficient data collection and communication across multiple nodes, reducing latency and enhancing performance.
- Optimized system performance using a Flask-based lightweight web application and SQLite for seamless front-end deployment and reliable data storage.
- Featured in the *International Journal for Research in Applied Science & Engineering Technology* for pioneering automated preventive measures against COVID-19.

Clothing Store Billing and Management

2023

- Built an Android application for invoice management, supporting over 1,000 invoices/month with features to create, print, and store invoices while tracking instalment-based bill payments.

- Integrated a barcode system that improved billing accuracy by 95% and streamlined stock maintenance, reducing transaction time by 40%.
- Implemented employee management and a reward system for regular customers, increasing customer retention rates by 20%.
- Digitized the billing system using AWS S3 for secure storage, enabling 24/7 accessibility and facilitating invoice delivery to over 500 customers/month via WhatsApp.

PROFESSIONAL EXPERIENCE

Cognizant Technology Solutions, India

Sept'21 - Jan'24

Programmer Analyst

Achievements

- Optimized application performance by implementing caching strategies and improving query efficiency, resulting in a 25% reduction in load times.
- Revamped the user interface design, leading to a 15% increase in user engagement and a significant reduction in bounce rates.
- Designed and applied a new feature that increased customer satisfaction by 20%, as measured by user feedback and engagement metrics.
- Created a cost-effective PDF label validator using Python that helped save \$1600 worth of yearly labor.

Responsibilities

- Developed responsive and user-friendly web interfaces using Angular, HTML, CSS, and TypeScript, enhancing the overall user experience.
- Utilized Java and Spring Boot for backend development, creating and maintaining microservices, with AWS optimization for backend processes.
- Designed and executed complex SQL queries, managed databases to ensure data integrity, and supported application functionalities and reporting needs.
- Actively participated in Agile team meetings and project discussions, collaborating with cross-functional teams to gather requirements, address issues, and develop robust solutions.
- Continuously updated technical knowledge and skills, staying current with advancements in software development, exemplifying a growth mindset.
- Provided training and mentorship to junior developers, enhancing team skills and contributing to a more collaborative and productive work environment.
- Provided technical support and troubleshooting for production issues, minimizing downtime and ensuring operational efficiency.

TECHNICAL SKILLS

Programming: Java, C++, C, Python, JavaScript, TypeScript, R

Web Technologies: Angular, Spring Boot, Spring MVC, Maven, HTML, CSS

Development Practices: Object Oriented Programming, Microservice Architecture, Data Structures

Database: MySQL, SQLite

Cloud and DevOps: AWS, Docker

Data Analysis Tools and Libraries: R-Studio, Matplotlib (Python), Seaborn (Python)

CERTIFICATIONS

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| • Amazon Web Services Certified Cloud Practitioner | 2023 |
| • Agile Crash Course: Agile Project Management; Agile Delivery (Udemy) | 2022 |
| • Machine Learning using AWS – Project Division | 2021 |
| • ‘Responsive Web Design: HTML5 + CSS3 for Entrepreneurs 2018’ (Udemy) | 2021 |