SHIVESH SARAVANAN

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EDUCATION

The University of Texas at Arlington   Aug. 2024 - May 2026
Master of Science in Computer Science

Amrita Vishwa Vidyapeetham   Sep. 2020 - July 2024
Bachelor of Technology in Computer Science and Engineering

EXPERIENCE

Software Developer   Aug. 2023 – July 2024
Holistic MD LLP   *Coimbatore,IN*

- Built Angular SPAs with HttpClient + RxJS, reducing API calls and improving load times by 32%, and delivered real-time WebSocket chat in Node.js (5,000+ users, <45ms latency) while optimizing REST APIs with JWT + rate limiting to cut overhead by 35%
- Containerized 6+ services with Docker and docker-compose, streamlining environment setup by 50% and reducing bugs by 30%, and integrated Spring Boot microservices (CORS, authentication, error handling) with robust integration tests
- Integrated Stripe payments and collaborated with Flutter team to ensure API compatibility and consistent cross-platform UX, while enabling CI/CD pipelines with Git + Jenkins for Dockerized deployments

Machine Learning Engineer Intern   Nov. 2022 – March 2023
TIFAC-CORE in Cyber Security   *Coimbatore,IN*

- Automated reverse-engineering for CVE-2019-11932, reducing analysis time by 45%, and trained PyTorch models for encrypted vs. compressed traffic classification (74% accuracy)
- Built PCAP-based data pipelines for network forensics and traffic classification, integrating ML insights into security reports for 10+ systems to speed patch deployment

PROJECTS

EduBlock: Blockchain Academic Verification | Code

- Built an Ethereum-based blockchain system for verifying certificates and hall tickets, reducing verification time from 2 days to 3 seconds
- Achieved 99.84% data reduction using SHA-256 hashing and PoA consensus across 10,000+ user records
- Enabled cross-institutional credit transfer and immutable academic record storage using secure smart contracts

FairShare: Intelligent Expense Management System | Code

- Designed an expense system using Flask and MySQL with LSTM forecasting, achieving 92% accuracy in prediction
- Built a recommendation engine using collaborative filtering and classification to improve purchase accuracy
- Automated bill processing with OCR and NLP, reducing entry time by 80% and achieving 98% accuracy in transaction detail extraction
- Developed an NLP-driven categorization model with clustering, enabling transaction labeling and user insights

SmartFlow: Adaptive Traffic Control System | Code

- Utilized NodeMCU, MQTT, and AWS SageMaker to predict traffic patterns with 85% accuracy
- Achieved response time below 200ms for real-time traffic control, ensuring fast system performance
- Reduced idle signal time by 30% through real-time sensor data processing for traffic density analysis
- Deployed cloud-based ML model with DynamoDB and API Gateway to enable lightweight IoT communication

TECHNICAL SKILLS

Languages: C, C++, CSS, Golang, Haskell, HTML, Java, JavaScript, Python, Scala, Solidity, SQL
Frameworks & Libraries: Angular, Bootstrap, Flask, Hadoop, Hive, JQuery, NLTK, Node.js, NumPy, pandas, Pig, PyTorch, React, Sklearn, Spark, TensorFlow, Truffle, Web3.js
Developer Tools: Amazon Web Services, Arduino, Cisco Packet Tracer, Docker, Eclipse, Git, Jenkins, Jira, Kubernetes, Metamask, Selenium, Visual Studio, Wireshark
Database: Cassandra, DynamoDB, MongoDB, MySQL
Operating System: Linux, macOS, Windows
Others: Agile (Scrum, CI/CD), Automation Testing, Ensemble Learning, System Design, Transfer Learning