

# SHIVESH SARAVANAN

☎ +1 817-723-9353 ✉ [sh4divu@gmail.com](mailto:sh4divu@gmail.com) [in shivesh-s](#) [Shivesh4](#) [Portfolio](#)

## 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