KATHAR PATCHA ABDUL RAHIM

Tamil Nadu, India | +91 8072368046 | katharpatcha5@gmail.com | LinkedIn | Portfolio | GitHub

TECHNICAL SKILLS

- **Programming Languages:** Java, Python, TypeScript, JavaScript, SQL
- **Web Development**:
  - **Frontend:** HTML, CSS, React, React Native, Angular (17+), Vue.js
  - **Backend:** NestJS, Node.js, Flask, Django, Spring Boot, RESTful APIs
- **Testing & QA:**
  - **Automation Frameworks:** Selenium, Playwright, TestNG, Appium
  - **API & Performance Testing:** Postman, REST Assured, JMeter, Load Testing
  - **Test Management & CI/CD:** ALM, JIRA, Bitbucket, Jenkins, GitHub Actions, Groovy, YAML
- **DevOps & Cloud:** Git (GitHub, Bitbucket), Docker, Kubernetes, AWS (S3, EMR), Azure
- **Databases:** MySQL, PostgreSQL, MongoDB, DynamoDB, Elasticsearch
- **Monitoring & Code Quality:** SonarQube, Sumo Logic
- **Big Data & Distributed Systems:** Apache Spark, Hadoop
- **Software Engineering:** Data Structures, Algorithms, Design Patterns, Socket Programming
- **Development Methodologies:** Agile, Scrum, Kanban
- **AI & Machine Learning:** TensorFlow, Scikit-learn, OpenCV, NLP, Computer Vision

EDUCATION

Master's in applied computing, Artificial Intelligence Stream **Jan 2024 – Apr 2025**
University of Windsor | Windsor, ON | 8.5/10

Bachelor's in computer science and engineering **Aug 2016 – Oct 2020**
Anna University, Chennai | Chennai, India | 8.6/10

WORK EXPERIENCE

Technical Analyst | **Central Transport** **Mar 2024 – Present**

- Contributed to a **full-stack web application** used to assist in **billing for logistics**, with **React** as the frontend and **Spring Boot** as the backend.
- Developed and maintained RESTful APIs in Spring Boot, integrating with **PostgreSQL** for shipment and billing data management.
- Built and enhanced responsive React components, applying **Redux** for state management and optimizing API integrations.
- Implemented updates to authentication and authorization features, ensuring secure access to sensitive billing information.
- Participated in Agile sprint planning, collaborating with billing and operations teams to refine requirements and deliver enhancements.
- Performed testing and validation using **Postman** for API testing and **Selenium** for UI automation.

Academic Intern | **Semper8** **Jan 2025 – Apr 2025**

- Developed and maintained full-stack applications using **NestJS** (backend) and **React Native with Expo** (frontend), ensuring seamless integration and responsive performance.
- Designed and implemented **MongoDB** as the primary database, optimizing queries for performance and using **Redis** for effective caching and session management.
- Built and tested **RESTful APIs**, integrating **AWS** services for deployment and endpoint management to ensure high scalability and uptime.
- Conducted comprehensive **unit, integration, and cross-platform testing** using **Jest**, **Appium**, and **Selenium**, maintaining consistent user experience across platforms.
- Automated build and deployment pipelines with **GitHub Actions**, **YAML**, and **Docker**, significantly reducing manual overhead and improving release cycle speed.
- Managed and optimized dependencies using **npm**, improving both frontend and backend efficiency.

Associate Software Engineer (SDET / QA Automation Engineer) | **Genesys** **May 2022 – Dec 2023**

- Led end-to-end testing for **Speech-to-Text** features in WEM, designing and building robust **Java-based automation frameworks** using advanced design patterns like the **Builder Pattern**.
- Designed and executed **test plans**, facilitated cross-functional **review meetings**, and tracked deliverables using **JIRA** and **Bitbucket**.
- Implemented **CI/CD pipelines** via **Jenkins**, integrating automated tests using **Groovy**, **XML**, and Jenkins UI; conducted **UI testing** with **Selenium** and **API testing** using **Postman** and Java frameworks.
- Boosted productivity by building internal tools and automation scripts using **Java**, **JavaScript**, **Vue.js**, **Python**, **Flask**, **HTML/CSS**, and RESTful APIs; leveraged **Sumo Logic** for real-time log analysis.
- Utilized **AWS S3** for cloud storage and **DynamoDB** for NoSQL database operations.
- Honoured with the **All-Star Award** for exceptional automation framework development and identification of critical redaction bugs.
- Built an internal application that replicated the complete organizational system in under **3 minutes**, reducing environment setup time from **2 days** and accelerating QA cycles.

Associate Software Engineer (QA Engineer) | **Accenture Solutions India Pvt Ltd** **Jan 2021 – May 2022**

- Developed **200+ automated test cases** using **Java** and **Selenium** with the **Page Object Model (POM)**; also conducted **manual testing** using **ALM**.
- Executed **regression testing** on web applications via **Jenkins** on remote test environments; performed backend data validation using **SQL**.
- Created **Java-based automation suites** for **20+ features**, improving test coverage and product reliability.
- Implemented an **Excel-driven data management system**, simplifying test execution and reducing redundancy.
- Integrated **SonarQube** for static **code quality analysis** and enhanced UI test efficiency with **automated screenshots and error logging**.
- Recognized among **Accenture's Top 10 Software Engineers** for excellence in test automation and quality assurance delivery.

PROJECTS – *view all*

Protein Content Claimer Application **Sep 2024 - Dec 2024**
University of Windsor | Windsor, ON

- Designed and developed an application in collaboration with the Guelph Research Centre to determine if a protein source meets regulatory requirements.
- Utilized Flask, SQLite, NLTK, Bcrypt, and socket programming to ensure accurate data analysis and secure authentication.
- Created a user-friendly interface for efficient protein data input, processing, and validation, delivering clear results aligned with regulatory standards.

Deep learning-based driver distraction detection **May 2024 - Aug 2024**
University of Windsor | Windsor, ON

- Developed a CNN-based driver distraction detection system using Python, TensorFlow, Keras, OpenCV, Pandas, and NumPy, classifying ten distinct driving behaviours to improve road safety.
- Achieved 99.24% test accuracy by integrating DenseNet121, a custom CNN architecture (DARNET), and ensemble learning, fine-tuning hyperparameters for superior model performance.
- Enhanced real-time detection efficiency through data augmentation, feature engineering, confusion matrix analysis, and visualization with Matplotlib, ensuring robustness across diverse driving conditions.

Human vs LLM - Text Detection **Jan 2024 - Apr 2024**
University of Windsor | Windsor, ON

- Developed an AI-powered text classification model using Python, NLP techniques, Word2Vec embeddings, and PCA, achieving 86% accuracy in distinguishing AI-generated and human-written text.
- Implemented binary and multi-class classification models with pre-trained transformers, feature engineering, hyperparameter tuning, and cross-validation, improving precision and recall.
- Optimized model performance through data augmentation and transfer learning, ensuring better generalization across diverse textual patterns and enhancing detection efficiency.