KATHAR PATCHA ABDUL RAHIM

Windsor, ON | 382-880-0747 | katharpatcha99@gmail.com | LinkedIn | Portfolio | GitHub

TECHNICAL SKILLS

- **Programming Languages**: Java, Python, C#, JavaScript
- **Web Development**
  - Frontend: HTML, CSS, JavaScript, React, Angular 17+
  - Backend: .Net 8, Flask, Django, Spring Boot, RESTful APIs, Nest Js, Node Js, Vue Js
- **Software Development:** Socket Programming, Data Structures, Design Patterns
- **Databases:** MySQL, MongoDB, PostgreSQL, DynamoDB
- **Tools & Cloud:** AWS, Azure, Docker, Kubernetes, Jenkins, Git (GitHub, Bitbucket), JIRA, Microsoft office suite
- **Testing & QA**
  - **Automation Frameworks:** Selenium, Playwright, TestNG, Appium
  - **API Testing:** Postman, RESTful APIs, JMeter, Load Testing, Performance Testing
- **Development Methodologies:** Agile, Scrum, Kanban

EDUCATION

Master's in applied computing, Artificial Intelligence Stream **Jan 2024 – Apr 2025**
University of Windsor | Windsor, ON | 8.75/10

Bachelor's in Computer Science and Engineering **Aug 2016 – Oct 2020**
Anna University, Chennai | Chennai, India | 8.6/10

WORK EXPERIENCE

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

- Developed and maintained full-stack applications using NestJS for backend and React/React Native with Expo for frontend, ensuring seamless integration and high performance.
- Designed and implemented MongoDB as the primary database, optimizing queries and ensuring efficient data retrieval, while utilizing Redis for caching and session management.
- Built and tested RESTful APIs, integrating AWS services for endpoints and deployment, ensuring scalability and reliability.
- Conducted unit, integration, and cross-platform testing using Jest, Appium, and Selenium, ensuring a consistent user experience across web and mobile.
- Automated build and deployment processes using CI/CD workflows with GitHub Actions, YAML, and Docker, streamlining development and release cycles.
- Leveraged npm to manage dependencies and optimize package usage for frontend and backend efficiency.

Software Development Engineer in Test | Genesys **May 2022 – Dec 2023**

- Led end-to-end testing for Speech-to-Text features in Workforce Engagement Management (WEM), designing and developing custom automation frameworks using Java with advanced design patterns (e.g., builder pattern).
- Designed comprehensive test plans, conducted review meetings with cross-functional teams, and managed tasks using JIRA with Bitbucket for code versioning.
- Implemented CI/CD pipelines in Jenkins, integrating automated tests via Groovy, XML, and Jenkins UI; performed UI testing with Selenium and API testing with Postman and automation framework.
- Enhanced team productivity by creating internal tools with JavaScript, Vue.js, Python, Flask, HTML, CSS, and API calls; utilized Sumo Logic for log analysis.
- Worked with AWS S3 for cloud storage and used DynamoDB for database management.
- Awarded the All-Star Award for outstanding framework development and critical bug identification in redaction features.
- Created an internal application that replicated the entire organizational system within 2-3 minutes, significantly reducing setup time from 2 days and enhancing test efficiency.

Associate Software 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) and performed manual testing through ALM for a healthcare client (Kaiser Permanente).
- Executed regression testing on web applications using remote machines and Jenkins, while managing database operations with SQL for data validation.
- Created test automation for 20+ features, ensuring comprehensive coverage and improved software reliability.
- Optimized test data management by implementing an Excel-based data retrieval method, reducing complexity and improving test efficiency.
- Integrated Sonar for code quality analysis and enhanced UI testing by adding screenshot capturing and error logging mechanisms, earning recognition as one of Accenture's top 10 Software Engineers.

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 Center 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 behaviors 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.

Web-Based Work Life Simulation **Jan 2024 - Apr 2024**
University of Windsor | Windsor, ON

- Developed an interactive web application to simulate a work environment, aimed at enhancing students' job readiness by offering live training and task completion experiences.
- Collaborated with industry partners to integrate real-world training modules, ensuring the simulation accurately reflected workplace dynamics and expectations.
- Built using Bootstrap for responsive design and SQL for data management, alongside other relevant technologies, to provide a seamless and engaging user experience.

CERTIFICATIONS – *view all*

• **Learning Spring with Spring Boot**	LinkedIn Learning	View Certificate
• **Web Development: Full Stack and Front End**	LinkedIn Learning	View Certificate
• **Introduction to Spark SQL and Data Frames**	LinkedIn Learning	View Certificate
• **Leaning Hadoop**	LinkedIn Learning	View Certificate
• **Web Development: Full stack and Frontend**	LinkedIn Learning	View Certificate