

KATHAR PATCHA ABDUL RAHIM

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OBJECTIVE

Dynamic and motivated Master's student in Applied Computing (AI Stream) at the University of Windsor, with 3 years of experience in software development, quality assurance, and DevOps practices. Skilled in developing robust applications using Python, Flask, and Java, with expertise in automation testing (Selenium, Playwright), WebRTC, and CI/CD pipelines. Proficient in AI/ML frameworks like TensorFlow and NLP, alongside strong capabilities in API testing and cross-platform testing. Passionate about contributing to innovative projects, delivering efficient solutions, and advancing my technical expertise.

TECHNICAL SKILLS

- **Programming Languages:** Java, Python, JavaScript, Shell, Unix
- **Web Development**
 - **Frontend:** HTML, CSS, JavaScript, Vue.js, React Native, React
 - **Backend:** Flask, Django, Spring Boot, RESTful APIs, Nest JS, Node JS
- **Software Development:** Socket Programming, Data Structures, Design Patterns, WebRTC
- **Databases:** MySQL, MongoDB, PostgreSQL, DynamoDB
- **Tools & Cloud:** AWS, Jenkins, JIRA, Git (GitHub, Bitbucket), IntelliJ, Eclipse, Sonar
- **Testing & QA**
 - **Automation Frameworks:** Selenium, Playwright, UFT, Cucumber, TestNG, Appium
 - **API Testing:** Postman, RESTFUL APIs, JMeter, Load Testing, Performance Testing
 - **Cross Platform Testing:** WebRTC Testing, Mobile & Web Compatibility Testing
- **AI & Machine Learning:** Neural Networks, Model Optimization, TensorFlow, PyTorch, Scikit-Learn, LLM, NLP

EDUCATION

Master's in applied computing, Artificial Intelligence Stream
University of Windsor | Windsor, ON | 3.5/4

Jan 2024 – Apr 2025

Bachelor's in Computer Science and Engineering
Anna University, Chennai | Chennai, India | 8.6/10

Aug 2016 – Oct 2020

WORK EXPERIENCE

Academic Intern | Semper8

Jan 2025 – Present

- Developed and optimized WebRTC applications using Python, React, React Native, and JavaScript, ensuring seamless real-time communication across platforms.
- Conducted unit, load (JMeter), and performance testing to enhance application stability and efficiency under varying network conditions.
- Performed cross-platform and UI testing using Appium and Selenium, ensuring consistent user experiences on web and mobile devices.
- Implemented continuous integration workflows with GitHub and YAML, automating test execution with Pytest and managing virtual Android devices via Android Studio.

Software Development Engineer in Test | Genesys Telecom Labs Pvt Ltd

May 2022 – Dec 2023

- Led end-to-end testing for Speech-to-Text features in Workforce Engagement Management (WEM), developing custom frameworks using Java with advanced design patterns like the builder pattern.
- Designed comprehensive test plans, conducted review meetings with cross-functional teams, and managed tasks using JIRA, with code versioning through Bitbucket.
- Implemented CI/CD pipelines in Jenkins, integrating automated tests via Groovy, XML, and Jenkins UI; performed UI testing with Selenium and Java, and manual API testing with Postman.
- Enhanced team productivity by creating internal tools with JavaScript, Vue.js, Python, Flask, HTML, CSS, and API calls; leveraged Sumo Logic for deep log analysis and received the All-Star Award for outstanding framework development and critical bug identification in redaction features.

- Developed automated test cases using Java and Selenium with the Page Object Model, 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.
- Optimized test data management by implementing an Excel-based data retrieval method, reducing complexity and improving test efficiency.
- Enhanced UI testing by integrating screenshot capturing and error logging mechanisms, earning recognition as one of Accenture’s top 10 testers.

PROJECTS – [view all](#)

Protein Content Claimer Application

University of Windsor | Windsor, ON

Sep 2024 - Dec 2024

- 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

University of Windsor | Windsor, ON

May 2024 - Aug 2024

- Engineered an advanced CNN-based driver distraction detection system capable of classifying ten distinct driving behaviors, enhancing road safety applications.
- Achieved 99.24% test accuracy by integrating DenseNet121 with a custom-designed CNN architecture (DARNET), leveraging ensemble learning for superior performance.
- Enhanced model robustness and real-time detection efficiency through meticulous optimization of pre-trained networks, fine-tuning hyperparameters, and applying advanced data augmentation techniques.

Human vs LLM - Text Detection

University of Windsor | Windsor, ON

Jan 2024 - Apr 2024

- Developed an AI model to detect AI-generated text, achieving 86% accuracy, using natural language processing (NLP) techniques and pre-trained transformers.
- Enhanced binary and multi-class classification models, applying feature engineering, hyperparameter tuning, and cross-validation to improve precision and recall for text distinction.
- Optimized model performance through data augmentation and transfer learning, enabling better generalization and handling of diverse text patterns.

Web-Based Work Life Simulation

University of Windsor | Windsor, ON

Jan 2024 - Apr 2024

- 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](#)

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|---|-------------------|----------------------------------|
| • Learning Spring with Spring Boot | LinkedIn Learning | View Certificate |
| • Unix Essential Training | LinkedIn Learning | View Certificate |
| • MySQL Essential Training | 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 |