Mohd Abdul Kareem Uddin

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**EDUCATION**

## Texas A&M University- Kingsville

Master of Science in Computer Science Graduated May-2025

# Relevant Coursework: Distributed Systems, Operating Systems, Machine Learning, Cloud Computing, Computer Communication Network Protocols.

# TECHNICAL SKILLS

Languages C++, C, HTML, CSS, Python, Java, JavaScript,Django.

Frameworks & Tools Node.js, React.js, Express.js, CI/CD,APIs, Microservices,SDLC

Databases MongoDB, PostgreSQL, SQL

Cloud Platforms AWS (Lambda, S3, EC2, RDS), Oracle Cloud, Familiar with GCP services (Big Query, Cloud Functions, IAM)

Soft Skills: Self-motivated, Leadership, Excellent written and verbal communication skills, Integrity, Result-oriented, Problem-solving, Clean Code, Scalability & Efficiency, Adaptable to Agile environments, Ability to articulate technical challenges and solutions

**EXPERIENCE**

## Graduate Teaching Assistant

## Texas A&M University–Kingsville Jan 2025 - May 2025

## Mentor students in Python, Java, data structures, and algorithms, Operating System, Kernel, RDBMS, conduct lab sessions, Object-oriented programming and design and collaborate on course content design and academic assessments.

## SDE- Intern

## AICTE Edu Skills – Hyderabad, India Oct 2021- Jan 2022

* Designed and implemented scalable, cloud-native backend services using AWS Lambda, EC2, S3, and RDS to support high-throughput ML workflows.
* Developed robust data pipelines to enable real-time data ingestion, processing, and integration across distributed systems.
* Built and maintained CI/CD pipelines using GitHub Actions and gained hands-on experience with Jenkins for automated build, testing, and deployment.
* Collaborated within Agile cross-functional teams to deliver secure and maintainable software aligned with business requirements.
* Ensured system performance and operational excellence through logging, monitoring, and fault-tolerant design principles.

## AI/ML Engineer – Intern (AICTE) Oct 2021- Jan 2022

## Engineered end-to-end machine learning pipelines for classification and predictive analytics, deploying models on AWS Lambda for real-time inference.

## Integrated scalable online learning systems using Python and applied best practices in model training, tuning, and validation.

## Collaborated with machine learning and software engineering teams to implement production-ready models with performance monitoring and retraining logic.

## Applied advanced techniques in feature engineering, model explainability (SHAP), and pipeline optimization to improve inference accuracy and efficiency.

## Contributed to the operationalization of ML models using cloud infrastructure, version control, and containerization principles.

## Cybersecurity Engineer (AICTE) Mar 2022- May 2022

## Executed comprehensive network vulnerability assessments and penetration testing to identify and remediate security risks in cloud environments.

## Configured and managed enterprise-grade firewall policies using Palo Alto Networks to enforce access controls and intrusion prevention.

## Collaborated with DevOps and engineering teams to integrate security best practices within CI/CD pipelines and cloud deployments.

## Implemented threat detection, log analysis, and incident response strategies to enhance system integrity and regulatory compliance.

## Contributed to security architecture reviews, risk assessments, and documentation aligned with enterprise cybersecurity standards.

## ACADEMIC PROJECT

Research Thesis:

* Built a **high-performance, scalable malware classification system** with **XGBoost** and **Genetic Algorithm**-based feature selection, demonstrating deep understanding of **real-time ML pipelines.**
* Implemented automated test scripts and validation checks to maintain model performance and code reliability., achieving 99.31% classification accuracy.
* Utilized advanced Python libraries: scikit-learn, DEAP, scikit-image, NumPy, SciPy, Pandas, Matplotlib, Seaborn, TensorFlow, PyTorch.

Restaurant Management System

* Stack: React.js, JavaScript, PHP, MySQL, JSON, API.
* Built a responsive full-stack reservation with real-time booking, AJAX-based forms, and an admin dashboard. Streamlined backend with optimized MySQL CRUD operations, improving operational efficiency by 35%.

IoT-Based Emission Monitoring

* Stack: IoT Sensors, Embedded C, Wi-Fi/Cellular
* Engineered a real-time IoT solution for vehicle emission tracking with remote diagnostics and wireless telemetry. Increased pollutant detection accuracy by 40% via embedded sensors and live dashboard analytics.

Heart Disease Prediction (Kaggle)

* Stack: Python, XGBoost, Scikit-learn, Pandas
* Developed an interpretable ML model using XGBoost and SHAP analysis for heart disease prediction. Achieved 90% accuracy through advanced feature engineering, outlier detection, and data visualization.

**PUBLICATION**

“IOT based Control System for Air Pollution Detection In Vehicles” at “***The International Journal of Analytical and Experimental Model Analysis***”.

# CERTIFICATION

Python For Everyone, Cyber Security, Cisco Networking, Programming in Python, Data science, Data analysis, IBM Full Stack Developer

# ACHIEVEMENTS & EXTRACURRICULARS

Awarded the Dean’s Merit Scholarship for outstanding academic performance in the Master of Science in Computer Science program at Texas A&M University–Kingsville.

Participated in a university-level Hackathon focused on AI/ML innovation and real-time problem solving.