# MUHAMMED SAMAL THADATHIL

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## WORK EXPERIENCE

**QBURST**                                                                                           Kerala, India
**Software Engineer**                                                                      Aug 2023 – Dec 2023
- Leveraged Gitlab CI/CD pipelines for continuous integration and delivery, ensuring seamless updates and improvements to the Python Django REST framework, resulting in a 30% increase in application efficiency.
- Managed a microservices architecture on cloud infrastructure, collaborating with cross-functional teams to integrate third-party APIs into the application, improving the functionality and expanding the user base by 25%.
- Employed RabbitMQ for handling asynchronous tasks and managing message queues, and utilized Redis for caching to optimize database queries, thereby increasing application performance by 40% and system scalability.

**CINETOKENS**                                                                                         Remote
**Full Stack Developer**                                                                   Aug 2022 – Jan 2023
- Developed an AWS file upload system, enhancing accessibility to critical files for admins. This networking solution resulted in a 15% increase in team productivity and a 20% improvement in operational efficiency.
- Created responsive user interfaces using ReactJS and TailwindCSS, strategically utilising these tools to drive a remarkable 33% spike in user engagement and a substantial 45% increase in web application usage metrics.
- Built a scalable REST API using NodeJs and ExpressJs for mobile/web apps, achieving an impressive uptime of 99.7%. This agile engineering approach streamlined the user experience by cutting downtime by 50%.

## HACKATHONS

**IBM CIC Hackathon: Innovation Squad Member**                      Leicester, United Kingdom
**WiseWallet**                                                                                           [Link](#)
- Developed and fine-tuned an AI model for analysis and feedback generation from shopping receipts.
- Built a Web application interface using Reactjs and TailwindCSS that enables users to submit purchase receipts.
- Optimised chatbot response generation using Firebase Cloud Firestore and Firestore Security Rules, improving accuracy by 15% and applied OCR technology for extracting and parsing text from the receipts.

## PROJECTS

**REALTIME HELMET DETECTOR**                                                             [Github](#)
- Designed and trained a robust and lightweight CNN model on top of MobileNetV2 using TensorFlow.
- Created a Python script using Numpy, Pandas and Scikit-Learn to perform data cleaning and preprocessing.
- Leveraged data preprocessing expertise (imputation, scaling, encoding) and a focal loss function to overcome class imbalance and low-resolution noise in images for helmet detection. Enabled the development of a custom CNN model with 20% faster training time and accurate performance despite image complexities.

## EDUCATION

**UNIVERSITY OF LEICESTER**                                                   Leicester, United Kingdom
Master of Science in Advanced Computer Science                             Jan 2024 - May 2025

**APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY**                             Kerala, India
Bachelor of Technology in Computer Science and Engineering                 Jun 2019 - Jun 2023

## TECHNICAL SKILLS

Data Structures and Algorithms, Object Oriented Programming (OOP), Database Management System, C, Java, Python, JavaScript, TypeScript, SQL, NoSQL, Redis, Django, Nodejs, ExpressJs, ReactJs, NextJs, Pandas, Numpy, Matplotlib, Scikit-Learn, OpenCV, Tensorflow, Docker, Kubernetes, Git, Google Cloud Platform, AWS.