



Profile

Work experience

Education

MUHAMMAD USMAN ALI

British

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Software developer with 2-3 years experience of working in the IT Industry. Currently undertaking MSc by research focused around Machine Learning from University of Bedfordshire alongside working part time as a freelance developer. First Class Bachelor's Degree in Software Engineering. Skilled in Node.js, Python Django, PHP, ReactJs, Angular, React Native. Certified as a Scrum Master/AWS Certified Developer.

Part-Time Freelance Software Developer

07/2019 – present

Remote

- Worked remotely on a range of projects web/mobile using technologies such as Node.js, PHP, Python Django, React Native, Expo, ReactJS and Angular etc.
- Developed a Web Portal for content management for a door maintenance app using Node.js/MongoDB for backend and ReactJS for the front end.
- Created RESTful backend API's built using Node.js protected with JWT authentication.
- Deployed the applications to AWS Elastic Beanstalk, EC2, AWS Lambda and other platforms based on the application requirements.
- Used tools such as Visual Studio Code, Git, Postman, CLI, Expo, NPM etc.

Software Developer

07/2017 – 07/2019

Drax Technology, Letchworth, United Kingdom

- Responsible for the migration of legacy software in Visual Basic to the cloud using RESTful web services hosted on the AWS Platform.
- Developed Web/Mobile based applications using PHP, Javascript, Node.js, Java, React Native, Angular, MySQL, AWS RDS, AWS Elastic Beanstalk, AWS SES, Git etc.
- Applying agile scrum practices such as daily scrum, sprint review, sprint planning in the project and acquired certification as a Scrum Master.
- Integrated with partner companies to send/receive data via RESTful services.
- Developed Dashboard to monitor realtime events from fire system with reporting features, insights into data using analytics, notifications via email etc.

Web Developer Internship

03/2017 – 07/2017

International Sheep Dog Society, Bedford, United Kingdom

- Improving the design of the current web pages on the International Sheep Dog Society websites using HTML, CSS and Javascript.

Access and Outreach Associate

10/2016 – 07/2017

University of Bedfordshire, Luton, United Kingdom

- Worked with learners from all age groups from 8 years old to undergraduate students
- Adhere to child protection and safeguarding protocols
- Assist with specific taster days at various campuses

Project Assistant

01/2016 – 06/2016

University of Bedfordshire, Luton, United Kingdom

- Plan, organise and conduct activities, including focus groups and individual interviews, to gather information from students and academics. Record the responses and data systematically and analyse the results generated.

MSc by research Machine learning to reduce false alarms

02/2018 – present

University of Bedfordshire, Luton, United Kingdom

- Msc by research which involved the thesis on the use of machine learning to reduce false fire alarms.

1st Class Degree in BSC (Hons) Software Engineering

09/2014 – 09/2017

University of Bedfordshire, Luton, United Kingdom

Certifications

AWS Certified Developer

AWS , London, United Kingdom

Scrum Master Certification

Scrum.org, Wyboston Lakes, United Kingdom

GDPR Foundation

IT Governance, London, United Kingdom

ISTQB Tester Foundation

International Software Testing Qualifications Board, London, United Kingdom

Skills

Programming languages

Javascript, Python, Java, PHP , C#, HTML, CSS

Frameworks

Angular, React Native, ReactJS, Django, Node.js, AWS Lambda Serverless

Data Management

MySQL, MongoDB, PostgreSQL, DynamoDB

Cloud Computing

AWS Certified Developer, AWS Elastic Beanstalk, EC2, AWS RDS

Projects

Door Maintenance Web Portal: Web app for managing content and documents about a specific door. The system holds information about doors on a building including compliance documents in PDF, Word, excel formats etc. Documents are uploaded through the portal. The REST API's are protected using JWT authentication. The subsequent information is then utilised by engineers via scanning the barcode for the specific door on the building. The documents are stored in Amazon S3 storage, front end is done using ReactJS with the backend in Node.js using MongoDB.

Technologies Used: Node.js, MongoDB, ReactJS, Amazon S3, AWS Elastic Beanstalk, Semantic UI etc.

Serverless App: Built backend RESTful API's using AWS Lambda(Node.js), API Gateway and DynamoDB as the database completely serverless. The backend stored information related users, blog posts, comments etc. The front-end framework used is Angular.

Technologies Used: AWS Lambda(Node.js), DynamoDB, API Gateway, Angular, AWS KMS, Materializecss etc.

False Fire Detection using machine learning: MSc by research project involved the use of machine learning to reduce false alarms. This included performing different data cleansing/filtering methods, machine learning algorithms such as SVM(Support Vector Machines), Logistic Regression, Naïve Bayes, Decision Trees and Random Forests. Data filtering methods such as k-fold cross validation, k-means clustering, LASSO regression etc were used too.

Technologies Used: Jupyter Notebook, Scikit Learn, Pandas, Numpy etc.

Door Maintenance Mobile App: Mobile app for engineers to check fire compliance for fire exit doors. The engineers can scan a QR code associated to a door and view any compliance document stored for that specific door. The engineers can pass the test on their visit or report any problem marking and uploading pictures if there are any problems.

Technologies Used: React-Native, Expo, Node.js, MongoDB , AWS S3, AWS Elastic Beanstalk etc.

SmartVue Dashboard: A web-based dashboard for monitoring of the different fire, fault, isolation and other events coming from the fire panel. The data is reported to the AMX system from the fire panel from where the data is stored in the cloud using Rest API's. The SmartVue Dashboard provides monitoring of these events in real time remotely. Fire officers can monitor multiple buildings using the dashboard remotely which include graphs, list view tables, filtering data based on date,site, event etc.

Technologies Used: PHP, AWS Elastic Beanstalk, Charts.js, AWS RDS,MySQL, Cron Jobs etc.

Door Monitoring Dashboard:A dashboard for monitoring the current status of the doors to i.e. if door is OPEN/CLOSE. The door information is gathered using an IOT proximity sensor fitted in the door. The opening and closing triggers a data change which is then updated on the dashboard. The IOT proximity sensor is purchased from a partner company hence an integration was done with the partner via REST API's to send the data to our database.

Technologies Used: PHP, AWS RDS MYSQL, AWS Elastic Beanstalk etc.