# ADAM **KAMARUL BAHRIN**

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## Education

***King's College London**, London, England.*                                                    Sept 2016 – June 2019

**BEng. (Hons) Electronic Engineering with Management - 2:1 Grade.**

Key Course Modules: Computer Vision, Electronic Circuits, Circuit Theory, Principles of Electronics, Internet Systems, Database Systems, Programming Practice.

***INTO City University London**, London, England.*                                                 Sept 2015- May 2016

International Foundation in Engineering and Mathematics – 84% Overall Grade.

***Fettes College**, Edinburgh, Scotland.*                                                         Aug 2010 – June 2015

A-Levels in Mathematics, Physics and Chemistry | 9 GCSEs including Maths, Physics and English.

## Key Skills

- **Programming Languages & Libraries:** Python, Node.js, React.js, React Native, Express.js, OpenCV, Scikit-learn, Pandas, Spark, Matplotlib, Plotly
- **Data Science & Machine Learning Frameworks:** TensorFlow, Keras, PyTorch
- **Web Frameworks & Databases:** Flask, Django, Streamlit, SQL, PostgreSQL, MongoDB, Redis, FastAPI
- **Cloud Platforms & Operating Systems:** AWS, Google Cloud Platform, Heroku, Linux, MacOS, Windows, Raspberry Pi

## Work Experience

***Queen's Lane Consultants**, London, England – Lead Software Engineer (Full-Stack)*          Mar 2022 - Present

- Developed client and admin portals with the MERN stack, optimising user experience and building scalable backend services with Node.js (Express.js, Fastify)
- Led development of tax automation software for R&D claims, building a RESTful API with Node.js (Express.js) and Python. Integrated HMRC's XML API and implemented OCR text extraction to automate CT600 form process and tax computations with Python.
- Designed a Redis queuing system in Node.js for asynchronous XML submissions, enhancing task queuing efficiency and status tracking.
- Led the development of Document and Form generators, designing and utilising APIs alongside web scraping to automate data extraction, form submission on gov.uk and document downloads, reducing manual data entry by 80% and optimising the R&D claim process.
- Built a file upload system using AWS SQS to queue tasks, save files to S3 and then transfer them to a local file server, automating file management and status monitoring.

***Aye Solutions**, Kuala Lumpur, Malaysia – Machine Learning Engineer*                          Jan – Aug 2021

- Involved in the research and development team on developing a Smart Access System.
- Built a Liveness Detection model to detect if the person in front of the camera of the system is alive and real using TensorFlow and Python.
- Developed data pipelines for the user registration using Python to ingest data lake from different sources like SQL and APIs.
- Prototypes a full stack application using Flask on AWS Lambda and React on AWS S3 for submitting user photos for facial feature extraction.

## Projects

*Euro 2024 Winner Prediction Web App*

- Developed a machine learning model to predict the winner of the UEFA Euro 2024 using historical match data and FIFA world rankings. Built and deployed a web app to allow users to input match details and view predicted outcomes. Used Python, Pandas, Scikit-learn, Streamlit, Railway

*Smart Access System (associated with Aye Solutions)*

- Built and deployed a fast and accurate facial recognition attendance system with a liveness detection, as well as document verification for a person's registration. Used Python, TensorFlow, MySQL, PHP, AWS, Raspberry Pi, Flask.

*Eye Contact Detector*

- Developed a convolutional neural network (CNN) to detect eye contact between a person and the camera, which the video feed is from. Used Python, TensorFlow, Google Cloud Platform.

## Achievements

- TensorFlow Developer Certificate                                                              2021
- UK Senior Mathematics Challenge Bronze Award                                                 2013 & 2014
- Duke of Edinburgh Bronze Award | Basic First Aid Course                                       2011