

Thomas Owen Jacobs

Software engineer currently employed within Raytheon UK Intelligence and Space, my role involves developing, testing and delivering mission critical products to our customers at speedy but maintaining a high level of quality. Experience working within multiple teams using common agile methodologies to manage projects and leadership experience to develop code in collaboration with other team members and external stakeholders.

Employment

Raytheon UK - Software Engineer

July 2020 - Present

- Based within 2 different product teams to develop solutions to solve customer problems that provide better insight to their data
- Creating products that meet customer requirements through iterative design with relevant stakeholders
- Producing details prototypes of solutions that provide very quick understanding and insight into what we might be able to offer
- Working on common world class cloud infrastructure to replace previously outdated and inefficient deployments of products in a secure manor
- Working within both small and large agile teams in an effective way to ensure we are working at our best
- Migrating legacy software to modern containerised model
- Presenting development updates regularly to stakeholder for feedback
- Taking on leadership roles to development of areas of the product in smaller teams

BAE Systems - Software Engineer

November 2019 – July 2020

- Main focus surrounding the testing of health management software for aircraft.
- Supporting the delivery of software releases to the client for roll out across all products.
- Maintenance and upgrade of product software working to the customers' requirements.
- Documenting updated testing procedures to save time and complete testing with automated systems.

DE&S (MOD) - Software Intern

June 2019 - August 2019

- As my first role in an environment more suited to my subject area of software engineering I worked to support products currently in use within the Maritime domain.
- Attended meetings with support partners and clients to push through changes.
- Worked in an agile team environment with regular project progress meetings.
- Gained experience liaising with different MOD departments in the production of a strategy guide for a platform management system.
- Gained understanding and knowledge of how ship software architecture is structured.
- Gained an understanding of the need for Defence Standards that help to keep conformity across organizations.

Manchester

tom.o.jacobs@hotmail.com

Github - /tomojacobs

Linked in - /thomas-o-jacobs

Qualifications

AWS – Certified Cloud Practitioner

September 2020

AWS – Solutions Architect Associate

September 2020

Languages & Frameworks

- Elastic
- Python
- Java
- React
- React Native
- Flutter
- SQL
- Android
- JavaScript
- Typescript
- CDK

Tools & Platforms

- GitHub
- GitLab
- Jira
- Confluence
- Visual Studio Code
- Expo
- Android studio
- AWS
- MongoDB
- Docker
- MS Teams
- Helm
- Kubernetes

Education

Lancaster University - BSc Hons Software Engineering

October 2016 - June 2019

- Fundamentals of computer science, Digital Systems, Databases, HCI, Computer Networks, Security, Advanced Programming, Distributed Systems

West Cheshire College - BTEC Software Development

September 2014 - June 2016

- Event driven programming, Software Design and Development, Object Oriented Programming, Games Development

Projects

Hub - An assistant app

As a side project for the last year I have been developing an assistant app, starting as a simple idea it grew to become effectively a personal assistant that provides features similar to google assistant but more targeted for my needs. The idea is nothing new but combines features from standalone products into one cohesive system. It is a learning opportunity to use frameworks and products I'm interested in and develop something useful from it.

The initial idea was based on a problem I wanted to solve at home, food waste. I buy food, I store it, things sit in the cupboard and don't get used until I remember it exists but by then it has expired and needs to be thrown out wasting money. A solution that would essentially act as an inventory manager could help to solve this problem. Food is scanned in, inputting its location and use by date via a device the app would alert me before a product expires that it needs to be used.

This project is still a work in progress but under the hood uses Flutter to develop the app (googles offering for a multi-platform single-code base framework) alongside a raspberry Pi server and containers running backend services such as DB and automated scripts.

Listing scraper - Rental property listing scraper

Much like the last project this is a personal project sprung on the back of a problem that I was having, when moving, finding a new location is not always straightforward and is a very tedious task. Visiting multiple estate agents daily to see if a new location has been added and if it's within my budget and has all the things I want can be very time consuming. This solution would scrape the most popular estate agents websites each day to look for new listings, would evaluate the listing to make sure it had all of my requirements and was within my budget. The script would then plot the location on a map and alert me that a new location had been found, i could review it and reject or view more details. Real world solution to an annoying problem.

Orbit - A smart home IOT as a service project.

As part of my final year project my team and I produced a web and app based interface for an IOT system to interface with sensors giving real time data. The system allowed users to set up "routines" very similar to that used by amazon echo, to track system history as well as a host of user features. The front end of the project was completed in react and react Native while the sensors were programmed in Arduino (C/C++) and the backend a combination of PHP, SQL and JavaScript.

River Crossing - A recreation of the board game

A java version of the river crossing board game, users have to get from the bottom of the board to the top only crossing planks. The user can pick up planks and move them but only to adjoining stumps. The game forces the user to backtrack and find a new way if they get stuck.

Skills

Testing and debugging

Testing and debugging of code is a vital part of producing a reliable product. I have worked with multiple methods of testing code as well as many frameworks for testing such as with cypress and cucumber testing for UI and unit tests with java and python.

Software principles

The use of software design principles aid the production of good products, such as the software development life cycle as well as OO principles like inheritance, encapsulation and polymorphism. These principles have been used where possible to enhance my development.

Communication and teamwork

I believe I am a very good communicator presenting many demos of our iterative work to stakeholders for feedback. These demos usually have a very positive response with the added use of diagrams which I am very keen on for explaining complex ideas and concepts. I work very closely with my teammates and have had great relationships over the years working with others without overshadowing their contributions.

Time-management and multitasking

This is a very important skill with agile to ensure that I can predict as accurately as possible the time and effort a ticket will take as well as constant feedback to the team of my progress as well as blockers and issues. I am not afraid to ask or offer help where needed and I strive to complete my work as close to the agreed time as possible.

Problem solving and Judgement

Problem solving is an integral skill in computing, things don't always work as anticipated or expected and curve balls are inevitable. Making quick decisions to fix an issue and keep on track is a skill which I feel I do quite well. Experience is key for this and the more challenging situations I find myself in the better I find my thinking for solutions to be.

Self-motivation

While I enjoy working in a team I always enjoy getting a problem to solve and working in my own little world to complete it. I can keep myself motivated and on track to deliver on my work.