Michael Yi wing **Yau**

SOFTWARE DEVELOPER

1, Clos Telerch, Rumney, Cardiff, Wales

📱 (+44) 7402205071 | ✉ m.yw.yau@gmail.com | 🏠 www.posquit0.com | mywyau | michael-hmrc | in michael-yau-360a92183

Skills

Programming Languages	Scala, Python, TypeScript, Rust, LaTeX
Back-End Development	Scala (Cats-Effect 3, Play Framework), RESTful APIs, Functional Programming
Front-End Development	React, Next.js, Play Framework, Tailwind CSS
DevOps & Cloud	Docker, GitHub Actions, CI/CD, AWS (EC2, S3, Lambda)
Database & Data Management	PostgreSQL, MongoDB, SQL, NoSQL
Misc.	Vim, Neovim, Ubuntu, MacOS, Various IDEs
Languages	English (Native), Chinese - Simplified (Intermediate), Chinese - Traditional/Cantonese (Fluent)

Experience

Capgemini   *Telford, England*
SCALA DEVELOPER   *Jan. 2021 - Present*

- Developed and optimized frontend designs for HMRC government services, ensuring accessibility, performance, and compliance with UK government standards.
- Led the enhancement of multiple services across key domains, including Tobacco and Alcohol Customs Duty, Charities Registration, the Covid Furlough Scheme, and Gov Gateway/SCP.
- Collaborated across cross-functional teams, contributing to both product development and live service maintenance.
- Designed, maintained, and enhanced automated testing frameworks, improving the efficiency of End-to-End and Performance Load tests.
- Integrated and optimized various in-house libraries, including encryption utilities and NoSQL Mongo-based backend tools, enhancing system security and scalability.
- Diagnosed and resolved critical production issues in legacy systems, improving reliability and performance.
- Implemented real-time monitoring and error diagnostics using Kibana, ensuring system stability across multiple environments.
- Analyzed and reverse-engineered live service systems to enhance documentation, streamline onboarding, and support knowledge transfer.
- Provided technical mentorship and facilitated onboarding for new hires and contractors, promoting knowledge sharing and best practices.

Ten10   *Leeds, England*
JUNIOR CONSULTANT   *Jan. 2019 - Dec. 2021*

- Software consulting specialising in Software Testing.
- Had software development and testing bootcamps going over Agile, Git, Java, JUnit, JMeter and various other topics, Selenium.
- On bench studied Python and played with various libaries for 7 months.
- Also completed ISTQB Testing Foundation and BCS Business Analysis certifications.
- Built a webscraper, a CNN using Keras API using Tensorflow, studied ML, neural networks and deep learning topics.
- Was then sent to Capgemini/HMRC to work with Scala and on HMRC Services

Certificates

2019	**BCS Business Analysis**,	British Computer Society
2019	**ISTQB Foundation**,	ISTQB Foundation

Self-Study / Pet Projects

FRONTEND & BACKEND DEVELOPMENT

- Developed a full-stack application using Next.js, Scala Typelevel stack, and PostgreSQL, implementing best practices in performance and maintainability.
- Explored and integrated various libraries within the React ecosystem, gaining hands-on experience in state management, component design, and API integration.
- Successfully utilised Tailwind CSS utility classes to streamline styling and improve user experience, with a focus on accessibility and responsive design.
- Built a backend using the Scala Typelevel stack, leveraging functional programming paradigms for robust and scalable applications.
- Implemented the Tagless Final pattern, improving abstraction, modularity, and testing capabilities within Scala-based microservices.
- Developed proficiency in SQL, focusing on database design, query optimization, and indexing strategies for improved performance.

RUST PROGRAMMING

- Completed the Rustlings exercises, gaining foundational knowledge in Rust's ownership model, memory safety, and concurrency features.
- Explored Rust's type system, pattern matching, and error handling, applying these concepts in small-scale projects.
- Gained experience working with Rust's ecosystem, including Cargo package management, unit testing, and build optimizations.

Scala Programming

- Explored the wider ecosystem outside of proprietary HMRC tools, such as Typelevel stack
- Further improved my understanding of functional programming researching Category Theory, Tageless Final and reading various material on Effect Systems
- Familiar with the native, practicing within my own repositories and making notes on new concepts

Python Programming

- Completed the Rustlings exercises, gaining foundational knowledge in Rust's ownership model, memory safety, and concurrency features.
- Explored Rust's type system, pattern matching, and error handling, applying these concepts in small-scale projects.
- Gained experience working with Rust's ecosystem, including Cargo package management, unit testing, and build optimizations.

Latex Programming

- Helped develop a friends Phd Thesis.
- Used to write out my CV special thanks to Claud D. Park. for the base template modified to suit my taste and needs

Cloud Computing Technologies

- Completed cloud quest lab and workshops.
- Set up VPC, EC2 instances
- Passing cloud certifications

Education

Cardiff University
BSc 3 Years Biochemistry 2:2

Cardiff, Wales
Sept. 2014 - Aug. 2017

St Teilo's Church in Wales Highschool
A Levels

Cardiff, Wales
Sept. 2012 - Aug. 2014

- ABBBa - Mathematics, Biology, Chemistry, Physics, Futher Mathematics