

Callum Haughtey-Wilkinson

07949729902
c.h_w@icloud.com

PROFILE

Passionate programmer, driven by enjoyment of problem solving to overcome logical challenges. Have a thirst for knowledge and desire to continually learn new technology and add to my development skill-set. I strive to deliver top class software through a holistic view of the development process.

KEY SKILLS

Python – 6 Years, 3 Years In Industry

Pre-industry experience using as a tool for modelling mathematical and physical problems while studying university level Physics and Astrophysics. Extensive Python industry experience. Proficient with versions 2.7, 3.6, 3.7.

Key Python Technologies, Libraries or Integrations:

- Celery with Rabbitmq backend
- Integrating with AWS through Boto
- Flask / Flask-Admin
- SQLAlchemy (expression and ORM API)
- Pytest
- Other: BDD test integration with Behave (similar to Gherkin), Selenium, Requests

JavaScript – 3 Years In Industry

Initially self-taught completing *The Big Nerd Ranch Project Book 'Front-End Web Development'*. First implemented in industry by applying principles learned from this book to create a library of JavaScript and jQuery functions to adapt a front-end test suite to become cross-browser compatible. Maintained microservices with simple react front-ends. Wrote large, rich front-end in Vue.js. Used as a backend-for-frontend (BFF) to create a GraphQL API for accessing and mutating data in the platform at arts alliance media. Key technologies: Vue.js, vuex, axios, React, lodash, express, graphql, jest.

SQL – 3 Years In Industry

First learnt at PanIntelligence through company training course. Used on a daily basis whilst working at PanIntelligence as part of testing business intelligence software that plugged into third party databases. Furthered these skills when working as Python Developer maintaining data-oriented microservices. Wrote high performance SQL to optimise a web applications and functions, minimise the number of queries executed and improve user experience when using the software. Used in ETL pipelines for vast amounts of data from many sources. Knowledge of AWS redshift and constructing data warehouses.

Containerisation – 3 Years In Industry

Containerised applications, microservices, test runners and python interpreters with Docker and deployed to EC2 (AWS) and Kubernetes (GCP). Used to allow reproducible infrastructure for both testing and development. Involved bash scripting, creating build tooling with Make, and creating linux environments in which to run software.

Cloud Infrastructure: AWS/GCP – 1.5 Years In Industry

Built and deployed web applications and microservices to AWS and GCP. Knowledgeable working with proprietary amazon technologies such as: S3, RDS, EC2, Redshift, SES and route53 as well as their GCP equivalents (GCE, GKE, SQL, Storage). Managed infrastructure as code using terraform.

Microservices – 3 Years In Industry

Built cloud microservices for AWS, from design to deployment. Microservices integrated through non-blocking I/O messaging with rabbitMQ and celery or Kafka, RESTful web APIs, GraphQL or alternative methods of data synchronisation. The microservices included web applications with front ends for user interaction, a data warehouse with ETL code, microservices for extracting/handling data and microservices for delivering data/communicating with applications through an API. Owned services from architecture and design stage to completion, with an emphasis on designing the distributed systems for scalability, concurrency and reliability.

Kubernetes – *1 Year In Industry*

Managed scalable cloud microservices staging and production deployments orchestrated in GCP using kubernetes.

General Software Development

- Practicing agile development including daily standups in every role
- In-depth code reviews
- Communication with product to define acceptance criteria and meet business needs
- Git / GitHub
- End-to-end and Automation Testing
- Atlassian Stack: Confluence, Jira, HipChat etc.
- Continuous Integration / Continuous Delivery (With Jenkins)
- Web Application Security / Penetration Testing
- Architecture and Designing Scalable Systems

EXPERIENCE

Full-Stack Software Engineer (6 Month Contract) – *Arts Alliance Media*

FEB 2019 – AUG 2019, LONDON

Brought in to ensure completion of two key projects worth >\$10 million in revenue. Held a key role on a small development team charged with completing the flagship product frontend written in vue.js, graphql backend-for-frontend (node.js) and associated microservices. Moved onto higher priority reporting project integrating data from all across the platform. Crafted a new ETL pipeline written in SQL, and python layer to generate JSON reports. A personal highlight on this project was writing an algorithmic XML log parser and event storage system to form events from indicators spread across multiple log files, leading to a large increase, 6% or approximately 37k events per day (and growing), in reporting accuracy.

QA Engineer – *Root Capital / XenZone*

OCT 2018 – FEB 2019, LONDON

Took a leading role in the project to release the new microservices-based product rewrite. My role mainly centred around creating and obtaining metrics about the product, in order to drive development work into the highest value areas on a tight deadline. I created a load test suite and infrastructure to stress the application, and recorded the metrics for all key user journeys to produce data to drive the team effort, presenting this data to both the team and senior leadership. From these metrics we identified the key areas of risk, and by collective team effort we achieved all of our functional and non-functional requirements to successfully release on the target date.

Python Developer – *Arts Alliance Media*

JUL 2017 – OCT 2018, LONDON

Arts Alliance Media (AAM) are the world leader in cinema technology, implementing the next generation of cloud based cinema software. Software I worked on is used in most large cinema chains worldwide, for example CineWorld, Vue, AMC, Wanda, CineMark, Odeon, covering an estimated 50% of the world's cinema screens. The magnitude and caliber of these customers taught me to handle the pressure and expected level of excellence, with low tolerance for failure. Took part in the architectural design, writing and implementation of microservices. Practiced TDD. Microservices built included: web applications with simple front-ends for user interaction (with flask-admin or react), a platform sprawling flagship product front-end written in vue.js, a data warehouse with ETL code, services for extracting/handling/returning/pushing data. Ran a web application security workshop. Secondary to development work, in this role I drew upon previous experience as a software test engineer to own the test and automation design process for my team's services, creating bespoke test tooling for each service took a leading role in the design and implementation of a platform level test environment.

Software Test Engineer (Contract, Remote) – *PanIntelligence*

SEP 2017 – FEB 2018, REMOTE

Was hired as a remote engineer to help maintain automation suites and build test infrastructure.

Software Test Engineer – PanIntelligence

MAY 2016 – JUL 2017, LEEDS

PanIntelligence are an up and coming, rapidly growing business intelligence startup born from a larger corporation. This was a great learning environment with lots of responsibility given early, accelerating my personal development in the tech industry. Quickly developed a working knowledge of development in an agile environment, and pushed myself beyond engineering tests to pick up development tasks as they became available. A highlight at PanIntelligence was rewriting a library of methods for the selenium using Javascript and Python objects representing common entities (page-object model) for the flagship web application, enabling the test framework to be run across all major browsers. During this period I also refactored the tests to be independent, allowing parallel execution with docker during builds, decreasing the total test run time from over 4 hours to approximately 15 minutes and allowing integration into the CI process, vastly improving development efficiency and business confidence in product builds and releases.

EDUCATION

University of York – BSc (hons) Physics with Astrophysics

SEP 2013 – MAY 2016

Developed problem solving skills using logical approaches. Initially began programming, using Python to solve physical problems and model data. Completed two modules on programming to solve mathematical and physical problems, achieving a first in both (78% and 76%). Gained knowledge of statistical and complex mathematics. Achieved a first in third-year project (71%) which involved processing a vast amount of data, turning multiple CSV files containing over 50,000 data points into useful analysis of cepheid variable stars.

Woodkirk Academy – A-level and GCSE

GCE A-level Physics (A), GCE A-level Chemistry (A), GCE A-level Biology (A), GCE AS- level Mathematics (A). Completed 10 GCSEs grade A* or A, including English Language and Literature.

GENERAL SKILLS

Mathematical Proficiency

Vast experience solving complex and detailed problems using mathematical principles. Achieved a gold award in the UKMT Mathematics Challenge.

Computers

Holistic approach to computing, maintaining and building a PC from components.
Experienced working on personal and business Linux, Windows and Apple OSX systems.
Experience using image manipulation software such as imageJ for dissertation work.

Public Speaking And Communication

Confident at public speaking. Achieved 82% and 77% in assessed presentations at conferences while at university. Took a leading role within a group project team to efficiently gather large volumes of data for the project. Confident voicing ideas while working in an agile environment during design/discussion meetings and daily stand ups.

ABOUT ME

Passionate about programming, I enjoy reading about new technology and take an interest in development culture. Read several books on development to further my knowledge, some of my favourites include: Clean Code by Robert Martin, Front-End Web Development Book by Aquino and Gandee, Learn Python the Hard Way by Zed A Shaw, HTML & CSS and JavaScript & JQuery by Jon Duckett, Fluent Python by Luciano Ramalho.

I enjoy reading sci-fi and modern classic fiction during downtime. My favourite novels is Dune by Frank Herbert.

References Available On Request