

Mark Simpson

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Software Engineer

SUMMARY

Generalist software engineer with heavy test engineer leanings. Experienced in creating testable code and good quality unit / integration tests, with a particular focus on maintainability. Well-versed in a variety of languages and platforms.

LANGUAGES

Python, C#, C++, Bash, Ruby, JavaScript

OPERATING SYSTEMS / DEVELOPMENT PLATFORMS

macOS, Windows, Linux (mostly Ubuntu & Amazon Linux), iOS, Android, WebGL

EXPERIENCE

Infinity Works / Next Gen Engineering

MARCH 2022 - PRESENT

Client A

- Data testing for data lake / ETL jobs (Python, Spark, Great Expectations)
- Running testing workshops & training developers (Python, Pytest)

Client B

- Full bug lifecycle management, test strategy, test plan for Proxy API for legacy application
- Full end-to-end testing of Proxy API (Postman)
- Establishing practices for effectively testing a C#/.NET ASP.NET service (C#, .NET, NUnit)

Client C

- Microservice testing with Java (Spring Boot, JUnit, WireMock, Bruno, Gherkin/Cucumber etc.)
- Improved reliability of tests, introduced component testing to reduced integration testing costs
- Migrated from Postman to Bruno & reduced friction via automation (Python, JavaScript)

Client D

- Building test framework to ensure compliance with industry standard regulations (Go, AWS)

I've also taken an active role in helping with the day-to-day running of teams in a number of areas:

- Identifying business problems, ensuring we're working on the right problem
- Improving processes, including managing incidents, carrying out root cause analysis

- Being a 'people lead' for 2 software engineers, helping them with their career
- Contributing to the 'family lead' side of things on multiple client accounts -- making sure colleagues are progressing, comfortable and receive the support they need.

WRLD3D — Senior Software Engineer

AUGUST 2014 - MARCH 2022

- Devops: provisioning, deploying & monitoring services (AWS, Packer.io, Docker, Server Density)
- Optimisation of hadoop data build process (Python, C#, Hadoop, AWS EMR, Pandas)
- CDN log ETL into AWS Redshift DB (S3, EMR, Pig, Data Pipeline)
- Created acceptance tests for regression-prone service (Postman, Elasticsearch, JavaScript)
- Integration of C++ positioning API into Leaflet-based web maps (Javascript, Emscripten, C++)
- Improved web integration for all platforms (Windows, MacOS, iOS, Android). Reduced code duplication, increased performance & created more consistent developer API (C++, cURL, libuv).
- Created web service to validate, build and deploy indoor map submissions (Ruby, Sinatra, Resque, AWS, Docker, Python, C#, C++)
- Reduced platform SDK build duration from 60 to 30 minutes (C++, Bash, TeamCity)
- Novel method to connect variable-width route visualisation meshes (C++, OpenGL)

WRLD3D — Software Engineer

SEPTEMBER 2010 - JULY 2014

- Developed a solution for creating 3D roads from 2D graph data. Rapidly took it from R&D through to large-scale use in production (Python, C#, Unity3D, Hadoop/EMR, AWS)
- Created a pluggable mechanism for generating terrain styles (Python, Hadoop/EMR)
- Created end-to-end nightly build system for testing resources (Python, TeamCity, Hadoop/EMR)
- Collision detection, spring camera behaviour "World Flight Club" (Facebook, C#, Unity3D)
- Core platform R&D (C#, Unity3D)

Realtime Worlds — Software Test Engineer

JANUARY 2008 - AUGUST 2010

- Responsible for supporting developers in creating automated tests (C#, NUnit)

EDUCATION

Abertay University, Dundee — BSc (Hons) Computer Games Technology (First class)

SEPTEMBER 2003 - MAY 2007

- Course modules included: Maths, Dynamics, AI, Console Development, Networking, Audio.
- My dissertation comparatively evaluated deferred and forward shading in game rendering.

REFERENCES

Available upon request.