MICHAEL HUNT

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Professional Profile

I am an experienced results focused RAD desk developer in Python and VBA for a number of top tier Asset Managers, Hedge Funds and Investment Banks with a track record of successful implementations. I am extremely versatile and adaptive and have the ability to work in challenging environments possessing excellent inter-personal, communication and documentation skills and the ability to work independently and to tight deadlines.

TECHNICAL SKILLS SUMMARY

Languages: Python, R, VBA, Power BI, C#, Java, C++, JavaScript, MATLAB, Ruby, Bash/dos
Python Libraries: NumPy, Pytest, Pandas, SciPy, Django, Flask, Graphql, FastAPI
Ruby Libraries: Rswag, swagger, Rspec
Cloud Environments: AWS(Certified), Azure, GCP, Redis, Sidekiq
JavaScript Frameworks: Angular, React
.Net Libraries: WPF, WCF, WinForms,
Databases: SqlServer, Postgres, Oracle, Sybase
BI Tools: Tableau. QlikView, PowerBI
Test Frameworks: Cucumber, Gherkin, PyTest, Behave,Selenium,Cypress
DevOps Tools: Docker, Travis, Circle CI, Jenkins, GitLab, Ansible
Agile Methodologies: BDD, SCRUM, Kanban
Source Control: Git, TFS, VSTS, Subversion

EMPLOYMENT HISTORY

Lead Developer Software Consultancy Olive Jar assigned to Beis (Permanent) Feb 2024 – Aug 2024

Working for BEIS in the Metrology department of OPSS at National Physical Laboratory migrating existing legacy vb6 apps which are used to drive a 50m long laser to C#. This is a deep archeology program as vb6 is no longer supported and which required migrating COM dll's to C#12.0/.Net8, aswell as dialogs and workflow into a .net8/winforms environment with just the existing vb6 source code. Extensive use of Excel COM interop for presenting the results in Excel plus getting familiar with hardware drivers for IEE 488.2 and e1735 laser module. Translated external corrective spreadsheets written in vba into python modules – these correct the instrumentation for air pressure , temperature gradients along the 50m laser ensuring results are to the nearest nanometre.

Migrating DBT(Department Business Trade) Prompt Payments website from Scala to Python/Django using BDD techniques such as Guerkin,Behave and Playwright. The idea is to define the behavior of the existing behaviour with Behave tests and replicate the behaviour with the new website which will pass the existing tests ensuring parity behaviour between the old and new website.

Tools used: C#12.0/.Net8, VB6, VBA, Python/Django, BDD, Guerkin, Behave, Playwright.

Back End Python Developer(Contract). BNP Paribas August 2023 to Oct 2023

Enhanced CVA dashboard using javascript to provide more feedback to the user for lengthy operations.

Migration of existing framework for top movers and top exposures to new prototype framework.

New functionality for downloading amendments for CE's and PFE's manual overrides and CVA adjusted exposures using Pandas and Numpys extensively.

Tools Used: *Python, GIT, SourceTree, Flask, Pycharm, Javascript, pandas, numpy*

Back End Ruby on Rails AWS **Cloud Developer(Contract). Ministry of Justice Jan to July 2023**

Setup github repo and build and deployment for new product for non standard magistrates payments

Built an api server using graphql and ruby on rails to serve a javascript front end.

Buiding a REST API using fastAPI in Python using swagger/openapi for a magistrate claim system which is the backend to a react web application.

Development of fullstack Ruby on Rails system for non standard magistrates payments using tdd hosted on in docker/AWS.

Tools Used: *Ruby, GIT, RubyMines/VS code, AWS, Docker, Kubernetes, Python, FastAPI*

Back End AWS Cloud Developer(Contract) Barclays(London) Jun 2022 to Dec 2022
Counterparty Risk Trading XVA and T0 Risk

Refactored existing database schema in AWS Redshift with more meaningful view names.

Re-scheduled report extraction using AWS Cloud formation which stored feeds into AWS S3, from AWS Event Bridge via step functions using SQS and AWS Python lambdas for parsing into AWS Redshift.

Feed cleaning in ETL pipeline using AWS lambdas.

Worked on Adjusftment UI in asp.net and angular which was hosted in an ECS instance to provide a way for traders to enter adjustments to pnl in order to correct risk.

Enhanced Python logging system in AWS Lambda to allow log level to be changed dynamically to ensure RTB can see any issues/anomalies and remediate accordingly.

Tools Used: *Python, GIT, PyCharm, AWS, Angular, Typescript, Circle CI/CD,*

Full Stack Python/Django Developer/Java/Spring (Permanent) Inivata (Cambridge) April 2020 to June 2022
Computational Genomics Team

Enhanced existing product range with new functionality and bug fixing in Python Django framework and Java/Spring.

Developed new RaDaR pipeline replacing old MRD pipeline with a variety of loaders for amplicons, exomes and target variant datatypes interfacing to salesforce in a cloud environment. Added new microservices to flask rest api for the pipeline to report new pipeline data to the user.

Enhanced and optimized code using profiling and benchmarking to speed up slow operations using threading.

Enhanced Spring Java Reporting module to customise reports with new collaborators.

Upgrading python applcations to use latest version of Django (3.2.7) and javascript/java libraries.

Developed publishing queue for published reports using redis and celery – this allows the lab director to cancel published reports, publish immediately or suspend publication indefinitely.

Tools Used: *Python, Django, GIT, Flask, Salesforce, Rest API, TDD, R, JavaScript, Java, Springboot, Celery, Redis, Groovy, Gradle, Docker, PyCharm, AWS, Circle CI/CD, Jenkins, Docker, Jasper, Cypress, Typescript*

Back End Developer (Contract) Crown Commercials Systems Feb 2019 to Aug 2019

- Delivered Government Procurement websites for Legal Services, Apprenticeship Training web sites in Ruby on Rails following GDS standards in an Agile environment collaborating with UX designers, business stakeholders and delivery managers.
- Produced Calculation Engine from an excel spreadsheet in exporting data from VBA into a Facilities Management website using Rspec in a test-driven environment.
- Deployed to AWS from GIT via CI/CD Travis build process using docker containers for rapid deployment and Terraform to deploy with Kubernetes to scale and load balance. Python was used for the deployment scripts in docker.

Tools Used: *Ruby on Rails, Python, Java, JavaScript, CSS, AWS, S3, ECS, Git, Travis, Docker, Terraform,Kubernetes, Redis, Sidekiq, Excel VBA*

Back End Developer (Contract) GAM Asset Management Oct 2018 to Dec 2018

- Developed Barra extract (ETL) tool in C#, SqlServer using TPL with WebServices and an Angular, Bootstrap front end.
- Enhanced RiskMetrics loader with new instrument types.
- Adhoc data extracts in C#, SqlServer, Excel for various fund managers and back populated data from various golden sources.
- Developed various Excel VBA spreadsheets for fund managers.
- Back populated data for reporting by combining multiple historic datasets to form a cohesive dataset for historical reporting as at the time of joining none was available.

Tools Used: *C#, ASP.NET, JavaScript, Angular, React, Bootstrap, Typescript, HTML5, SqlServer, TFS, Excel VBA*

Lead Back End Python/Django/Ruby/Rails Developer (Contract) Barings Asset Management Apr 2017 to Oct 2018

- Migrated legacy system in Sybase onto SqlServer including valuations reports for Clients.
- Developed about 30 SSIS/SSRS reports for Everest Trade System.
- Produced Power BI Dashboards to show Portfolio breakdown by Country, Currency.
- Enhanced Ruby reporting system with various new options including new trade types.
- Developed Java Component's to improve reporting system and various data/feed loaders.
- Developed various spreadsheets in Excel VBA for fund managers for data extracts.
- Ported Ruby on Rails reporting systems to Python/Django allowing the business to run ad-hoc queries intraday (this was because the department didn't have ruby experience but some python

experience).

- Developed C#/ASP Web reporting frontend for Bisam Analytics System.
- Wrote various batch scripts in bash on Unix for the overnight batch system.
- Initiated project to save support work by building web reporting tool in Python/Django to launch reports in sql.

Tools Used: *, PoweBI, SqlServer, SSRS/SSIS, Python, Django, Ruby, Rails, Java, C#, ASP.NET, Excel VBA, JavaScript, HTML5, Java 8, OracleAzure Devops*

Lead Credit Risk Tech Developer/BA (Contract) UBS Apr 2014 to Oct 2016

Collaborated with a trader in Hong Kong via remote pairing to develop a Risk Based T Zero PnL system in Excel VBA, C# and Sql Server which provides Pnl attribution and estimates ahead of the official Pnl to give traders an estimate of Pnl of which they can then sign off on. Built a team consisting of 10 more developers to productionise the system. This was rolled out across the entire Treasury department information was stored in a SQL Server SSAS OLAP Data Cube for access by product control and senior management via C# WPF MIS which used a MDX,DAX query dashboard.
Working directly for the XVA trading desk which manages counterparty credit risk exposure providing business support which involved the following projects:

- Developed a Collateral Optimisation system which was written in Python using Numpy,Pandas and SciPy along with a trader and a quant to calculate the cheapest to deliver for collateral management.
- Lead a team of offshore resources and handed over various responsibilities to the team members to continue development of core product.
- Enhanced a python front office toolkit which was written using PyTest using TDD which was accessible from Excel as an add-in which performed various operations such as loading yield curves to replace Excel DNA functions.
- Developed C#/C++ Library in Excel DNA to improve performance bottlenecks in various trader spreadsheets.
- Developed C# library which talks to a WCF backend to get yield curves for T0 estimates so traders would not have to wait behind for the official curves
- Developed FVA System to produce Funding Costs required to hedge positions.
- Developed Risk Break Report System to report any upcoming breaks.

Tools Used: *Python, C#, C++, ExcelVBA, SqlServer 2012, Excel VBA, Access, Git, Jira*

C# Developer (Contract) Credit Suisse Aug 2012 to Feb 2014

Involved in the migration of around 100 trader spread sheets for the CVA desk using in house analytics library to a C# Risk System which has a Prism MVVM WPF architecture using DevExpress with Unity dependency injection using EMS for communication and WCF services persisting to a SQL Server database and a SSAS cube for Risk slicing. As part of the migration process I performed the following tasks:

- Developed and bug fixed existing Risk System in C#/C++ and identifying issues and providing code fixes for the WCF server and WPF client side deployed via Teamcity.
- Developed tools in C# to monitor critical systems and allow failed tasks to be relaunched and provide feedback to the user via WPF interface.
- Developed COM components in C#/C++ to use in trader spreadsheets.
- Testing and configuring new pricing models with quants producing impact analysis for the desk.
- Providing 3rd line and overnight support to the follow the sun BAU team.
- Controlled and monitored various jobs on the HPC grid and cloud.

Tools Used: *C#, SqlServer 2012, Excel VBA, WPF, WCF, C++, COM/XLL, Team City, Subversion, Jira*

C# Pricing Developer (Contract) Barclays Capital Jul 2011 to Aug 2012

Developed Basel III CVA RWA functionality for existing Risk Engine system which is written in Excel VBA interfacing to existing quant libraries in C++/C# and in house functional languages involving extensive interaction with quants and traders. The Risk Engine runs on an HPC grid and runs a Monte Carlo analysis to produce results.

- Developed RWA functionality to calculate LGD, PD, EAE, EPE, EEPE metrics for Basel 3.
- Developed COM components in C# Interop to optimise Excel performance and memory usage in order to speed up the interactivity of the spread sheet.
- Developed Correlation and Calibration data feeds for in house Risk Team allowing market risk to be accurately modelled using the bank standards.
- Developed Risk export functionality allowing trades to be valued and exported in XML to other downstream systems.
- Developed CVA Portfolio analysis functionality allowing trades to be aggregated by portfolio.
- Developed Numeraire functionality to allow existing systems to be calibrated against each other.

Tools Used: *C#, SqlServer 2012, Excel VBA, COM, Team City, Perforce, Jira*