
SUMMARY

Results-driven Python Engineer with 3+ years of experience delivering trading and operations software solutions. Managed full lifecycle of high-priority projects, from requirements analysis to production release. Scrum Master coordinating Agile processes for 7-member team, improving task completion rates and release date accuracy. Driver of improvements in testing and deployment automation and management of team infrastructure.

EXPERIENCE

- **Nomura International** London, UK
Associate Software Developer *Dec 2022 – Present*
 - Delivery of the full lifecycle, analysis to release, of prioritised projects with a range of scopes for features, solutions to functional weaknesses and firm-wide initiatives across the bank's global risk management platform.
 - Scrum master for a global team of 7 developers. Improved sprint task completion rates from below 50% to 75% and accuracy of proposed completion dates for implementation of features and fixes.
 - Input into development of new CI/CD serverless/Kubernetes platform and its roll-out to the wider business as part of a working group.
 - Pushed for, planned and executed a validation mapping engine rewrite as part of a prioritised project. Improved performance by 600%, with release of the new functionality supported by a suite of back-testing, integration and unit-testing functionality.
 - Successful rewrite and re-platform of legacy automated trade rebooking process into containerised python from VBA. Improved performance by 30%, decreased production issues through robust error handling and increased observability through improvements to logging and reporting.
 - Lead for creation of new trade validation library, incorporating automated unit-testing, CI/CD, rigorous coding standards within a robust software development lifecycle. Consideration for future compatibility as a dependency within a microservice architecture.
- **Wiley Edge (formerly mthree) — on-site at Nomura** London, UK
Python Engineer *July 2021 – Dec 2022*
 - Development, testing and release of robust processes and functionality focusing on data integrity, extensibility and testability.
 - Support of the bank's risk management system through development of new features, bug fixes, refactoring/improvements, regulatory requirements and direct assistance to business users.
 - Analysis, task creation, management and implementation of business-prioritised projects, requiring communication with business stakeholders and existing business knowledge.
 - Developed a Linux-first proof of concept and productionised a process to replace a legacy VB6 application. Built out, prototyped and managed the team's first Linux infrastructure, contributing to the pipelines and supporting the architecture which underpins the wider business unit's containerisation processes.
 - Pushed for and achieved early conversion to permanent employee within 18 months, requiring additional sign off and a cost to Nomura.
- **University of Bristol** Bristol, UK
Postgraduate Researcher/PhD Candidate *October 2017 – Mar 2022*
 - Design of algorithms and data structures for implementation of kinetic Monte Carlo model using FORTRAN08, translating scientific theory from different sources into mechanisms available to the model.
 - Self-management and motivation during long sub-projects.
 - Data analysis of model outputs, data plotting and statistical analysis using Python: Pandas, Numpy, Matplotlib, Jupyter.
 - Assisted students in design and troubleshooting of numerical simulations of physics concepts implemented in Python; marked and gave feedback on submitted code and formal reports.

PERSONAL PROJECTS

- **2018: IMPRESSION:** Full-stack - Online submission of molecules to machine-learning NMR shift prediction model.
- **2022: Gambit:** Chess RESTful API to identify whether a chess game contains a recognised "gambit".

EDUCATION

- **University of Bristol** Bristol, UK
PhD, Computational Chemistry Oct. 2017 – Mar. 2022
- **University of Warwick** Coventry, UK
MSc Diamond Science and Technology, 1st Class Honours Oct. 2016 – Oct. 2017
- **University of Bristol** Bristol, UK
MSc Chemical Physics, 1st Class Honours Oct. 2012 – Jul. 2016

PROGRAMMING SKILLS

- **Languages:** Python, VBA
- **Technologies:** Linux, Docker, Jenkins, Flask, Kubernetes, Git