Max Williams

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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 – July. 2016

EXPERIENCE

Nomura International — London, UK
Associate Software Developer — Dec 2022 – Present

- Identification, analysis, prioritisation and development of features, solutions to functional weaknesses or prioritised projects 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 a new CI/CD serverless/Kubernetes platform and its release 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.

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 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 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.

PROJECTS

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

PROGRAMMING SKILLS

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