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 Honors — *Oct. 2016 – Oct. 2017*

- **University of Bristol** — Bristol, UK
  MSc Chemical Physics, 1st Class Honors — *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 banks' global risk management platform.
  - Acting 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.
  - Member of the platform working-group, assisting development of the new CI/CD serverless/kubernetes platform and its roll-out to the wider business. Assisting colleagues on projects which can use the next generation of continuous integration and cloud deployment.
  - Pushed for, planned and executed a validation mapping engine rewrite as part of a prioritised project. Improved performance by 600%, with release and roll-out 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 support the wider business unit's containerisation processes.
  - Pushed for and achieved early conversion to permanent within 18 months, requiring additional sign-off and early-conversion payment to Wiley-Edge.

- **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 on month- to quarter-long sub-projects.
  - Data analysis of model outputs, data plotting and statistical analysis using Python: pandas, numpy, matplotlib, juypter notebooks.
  - Computational physics demonstrator: assist students in design and troubleshooting of python programs implementing numerical simulations of physics concepts; mark and give feedback on submitted code and formal write-ups.

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