Nicolas Alexander Robinson

Personal Details

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Highly motivated and determined, I continually strive to expand my knowledge and my skill set. Having lived and studied in France and Switzerland, and now in the UK since 2019, I have a broad international outlook and can adapt into new work and social environments with ease. I have a strong academic record of achievement, with excellent results within STEM subjects for my IGCSEs and International Baccalaureate. While studying Physics at University, I developed a strong and rapidly expanding interest in Computing and Technology and am now committed to a career in Computing.

Education and Qualifications

Sept 2022 – Sept 2023 **MSc in Computing and Information Systems (Predicted class: 1st)**
Queen Mary University of London

Semester 1 Modules: (Module average: 86.1%, Class: 1st)

- **Computer Programming (Python) – 98.3%:** Program design and construction, Python programming language concepts: collections, files, exceptions, functions, objects, regex.
- **Computer Architecture and Networks – 70%:** Von Neumann architecture, Internet protocols, routing and performance issues, DNS, WWW (HTTP)
- **Introduction to Software Engineering – 90%:** Requirements capture, UML use case and class diagrams, project management, software lifecycle, quality assurance and testing
- **Database Systems – 86.2%:** Database components, modelling techniques, implementation, Oracle SQL, Object-Oriented NoSQL database systems

Semester 2 Modules:

- **Security and Authentication:** Familiarity with building secure web applications, and strong grasp of Linux, Windows and MacOS operating systems. Extensive familiarity with Web APIs. Familiarity with best practices in terms of web application security (Code injection prevention, input validation and sanitization)
- **Mobile Services, Data Analytics, Risk and Decision-making for Data Science and AI.**

2019 – 2022 **BSc in Physics (Class 2:2 – 58%)**
University of Bath

First year result**: 1st Class** (73.6%) Second year result**: 1st Class** (70.6%)

Computing modules studied during BSc Physics (all accessible via public GitHub repositories):

- **Experimental Physics and Computing –** C Programming coding Fourier and inverse Fourier transforms
- **Computational Physics –** C++, DLA model and Ising model.
- **Computational Astrophysics –** Python, used to model the trajectory of Halley's Comet around the Sun. C Programming, Radiative Transfer problems

2015 – 2019 **Institut International de Lancy, Geneva, Switzerland**

June 2019 **International Baccalaureate** (**40 out of 45 points**)
Higher Level Subjects: **Physics (7), Mathematics (6), Chemistry (6)**
Standard Level Subjects: **French (7), Economics (6), English Literature (6)**

June 2017 **IGCSEs**
Mathematics (A*), Physics (A*), Chemistry (A*), Biology (A*) French (A*)
Geography (A), Spanish (A), English Language (B), English Literature (B)

Computing MSc Dissertation Project, NFC event ticketing architectural system

- iOS and Android compatible mobile application built using Apache Cordova for attending users
- Server running using node.js and express.js commanding a local MySQL database using the node package mysql
- MySQL relational database storing user, event, organiser tables with JSON object columns
- GUI built using tkinter Python library and packaged for distribution for event organisers, implementing mysql database using sql-connector-python (alternate identical functionality web application built using flask and jinja2)
- NFC-enabled Arduino microcontroller (NFC shield component fitted) with task-specific C++ programs written incorporating NDEF and PN532 libraries, ready for upload
- Serial communication between Arduino and host device (USB) of tkinter GUI using pip module pyserial

Projects (all accessible via public GitHub repositories)

- Personal website developed using React.js (not publicly deployed)
- Library relational database system design written using Oracle SQL
- UK Covid Dashboard written in Python available through Binders/Voila using data queried from UK Gov Open Data API

Technical Skills Acquired (on personal initiative)

- Linux Fundamentals Course on web security platform TryHackMe
- Full-stack Web Development Certification Course (Shaw Academy), including introduction to Javascript, PHP Bootstrap, JQuery, AJAX. Database Management using SQL.
- AWS Certified Cloud Practitioner.
- Python Data Analytics and Machine Learning Certification Course (Udemy) – Experience with Python packages scikit and seaborne.

Work experience

June 2022 – Aug 2022 **Summer Internship - Barclays (Northampton, UK)**

- Summer Intern in Risk, Treasury and Finance department – specifically a part of the Treasury Data Service (TDS) team
    - TDS is responsible for data storage, cataloguing and processing feed datasets into final datasets used in a multitude of financial reports
    - Applications written in Scala – I developed a foundational understanding of the functional programming language Scala and have seen its implementation in large software systems

June 2016 – July 2016 **Stagiaire – CERN (Geneva, Switzerland)**
(European Centre for Nuclear Research)

- Working under the supervision of an Operations expert of the Proton Synchrotron.
- Introduced to complex software that optimises beam conditions. With the proper guidance, I quickly adapted to the environment and became familiar with this bespoke, in-house software.
- Objectives achieved:
    - Gained insight into the complexity of the CERN accelerator systems and the collaborative spirit needed to ensure their successful operation
    - Reconstruction of a web page to facilitate more efficient and clear navigation by CERN physicists.

Activities/Interests

<u>Sports</u>

- Club Development Officer for University of Bath Karate Club. Responsible for upholding the spirit and ethos of the club and communication with its members.
- Passionate runner: Completed L'Escalade (5km), Geneva Harmony 10km, Brighton Half Marathon (20km), Brighton Marathon (40km)

<u>International Travel and Culture</u>

- Attended schools in the UK, France and Switzerland. Well-travelled in Europe, USA and Asia.
- High level of proficiency in French, through attendance for four years at a French state primary school

References – Available on request