

# Joshua Langley

SOFTWARE ENGINEER · TECHNICAL ANALYST

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🌐 josh-langley

## Education

### University of Manchester

MENG WITH INDUSTRIAL EXPERIENCE COMPUTER SCIENCE

- 1st Class degree classification achieved throughout degree.

Manchester, UK

Sep. 2013 - Jun. 2018 (PRESENT)

### Oakwood Park Grammar School

PHYSICS – A, COMPUTER SCIENCE – A, MATHS – B, EXTENDED PROJECT QUALIFICATION – B

Maidstone, UK

Sep. 2011 - Jun. 2013

## Experience

### Credit Suisse

SOFTWARE ENGINEERING – CONTRACTOR, CREDIT RISK – C# 4.7

- Designed and developed a WCF C# 4.7 microservice based valuation distribution engine for accelerating End of Day credit analysis by several orders of magnitude.
- Developed C#/Python/SQL automation tools for informing support staff to resolve credit risk valuation failures in a timely manner.

London, UK

Jun. 2017 – Sep. 2017

### Credit Suisse

TECHNICAL ANALYST – APPLICATION DEVELOPER, CREDIT RISK – C# 4.6, Python 2.7, Splunk

- Created Splunk based reports, dashboards and alerts; simplifying maintenance and highlighting potential issues automatically. Categorising errors into buckets using machines learning techniques to discover the resolution.
- Engineered a system in Python to utilise a firm-wide data lake, using anomaly detection with regression based techniques to determine high risk scheduled runs across the bank.
- Aided in the founding of the internal Machine Learning Affinity Group for internal consulting, reducing costs of programmes significantly across all departments.
- Maintained and developed a C#/SQL Risk Management System to generate position level risk valuation for over 200+ products using scenario and analytic based approaches. Used by front office traders, product control, and regulators.
- Participant in a charity hackathon, where we developed a full stack auction website using Mongo databases, Express framework, AngularJS, and NodeJS

London, UK

Jun. 2016 – Jun. 2017

### Credit Suisse

SPRING INSIGHT WEEK

- Networked with all functions of the firm to gain understanding of the firms architecture and business processes.

London, UK

Apr. 2015

## Extracurricular

UNIVERSITY OF MANCHESTER STUDENT COORDINATOR

Innovated new processes to facilitate second year student development, focusing on employability and professional life.

Jun. 2017 - Sep. 2018 Present

STUDENTHACK IV VOLUNTEER COORDINATOR

Administered a team of 30 volunteers to deliver logistic needs over a 48 hour period; managing various operations and scheduling.

March 2016

GREATUNIHack 2015 VOLUNTEER

Operated as a member of a 20 person team to handle logistics and help students where needed; advising on technical and personal matters.

November 2015

STAFF STUDENT COMMITTEE STUDENT REPRESENTATIVE

Represented the body of students across all years to provide continuous improvement to the programme.

Oct. 2015 - Jun. 2018 Present

COMPUTER SCIENCE SOCIETY CO-CHAIR

Chaired meetings and facilitated the need of the team to provide industry and social events to the school of computer science. Developing their inter-personnel skills and improving business acumen.

Sep. 2014 - Jun. 2016

UNIVERSITY OF MANCHESTER PASS LEADER

Accommodated first years and their needs, providing technical skills and experience to assist in their learning.

Sep. 2014 - Jun. 2016

## Projects

### Neural .Net

C# library for compiling computational graphs into neural networks with arbitrary loss functions and learning algorithms.

### Android DevOps Service

Java Android application which allows connection to machines running a Java-based service. Allowing the user to run a collection customisable commands with cryptographic authentication.

### Monte Carlo Chess Agent

C# agent which uses Monte Carlo techniques to solve a chess game against an opponent.

### Animal Agent Behaviour Simulator

2D topological simulation written in Java trained Hidden Markov Models/Kalman Filters for simulating animal movement and states.

### C++ OpenGL Planetarium

C++/OpenGL physics based planetarium with euclidean physics simulation and collision detection.