JOSHUA GORNALL

Currently based in London, UK

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Education

University of Manchester
Sept. 2019 – Sept. 2021

MPhil (PhD programme) in Computational Material Physics
Manchester, UK

Research aim: To better understand the leaching process of inhibitor particles in a polymer coating system in order to establish a relationship between the microstructure and its corrosion protection properties and performance.

- Development of a cellular automata model to simulate diffusion and dissolution kinetics of particles in comparison to real experimental data shows promising results over other mathematical and phenomenological approaches explored.

University of Liverpool
Sept. 2015 – July 2019

Bachelor of Science in Chemistry with Honours
Liverpool, UK

Graduated with Upper 2.1 Classification (67% average)

- Highlight Project: Developed a Metropolis Monte Carlo simulation of a two dimensional (2D) system of particles interacting via the Lennard-Jones potential in a system with periodic boundary conditions.

Carmel College
Sept. 2013 – Aug. 2015

A Levels
St.Helens, UK

A*, A, A in Mathematics, Chemistry and Biology respectively.

Technical Courses/Certifications

Stanford University - Machine Learning course delivered by Andrew Ng | Issued: 20/05/2021
University of Pennsylvania - Computational Thinking for Problem Solving | Issued: 23/02/2021
Google IT Automation with Python Professional Certificate | Issued: Ongoing

Relevant Technical Experience

Software Engineer Intern
June 2019 – Sept. 2019

Google
Mountain View, CA

I was based in the Mobile Search (Web) team. My project there was to revamp the Google search preferences page for high end phones and Android tablet. You can check it out by visiting Google Preferences in your tablet/smartphone's browser. The critical analysis and software design was the key to success, and the experience allowed me to understand and gain vital skills in meticulous and methodical approaches in software testing and development.

Maths and Cryptography Summer Programme
June 2021 – Aug. 2021

GCHQ
Undisclosed

My role entailed developing novel mathematical techniques and analytical tools in order to make logical and coherent deductions from digital signals received over noisy channels. It also involved implementing and optimising complex mathematical algorithms on high performance computers. I was offered a full time position that I turned down to pursue my passion of software engineering.

Undergraduate Laboratory Supervisor
Oct. 2019 – March 2020

University of Manchester
Manchester

Experience supervising undergraduate students in their final year projects in the Department of Chemistry. I was given the opportunity to mark reports on a weekly basis and oversee experimental work in a laboratory setting.

- Teaching fellow with positive evaluation 4.78/5.00 from 93 students.
- Supervised 2 undergraduate summer projects resulting in talks at major conferences and manuscripts for publication.

Employment and Work Experience

Founder of e-Commerce B2B Software Company
Sept. 2020 – Present

Sandbox Themes | www.sandboxthemes.com
Worldwide

A software company in which I am an independent theme designer and developer that creates premium themes for Shopify. The companies primary focus is developing solutions to software themes speed and performance problems.

- Over 500 sales of my turbo themes including brand partner K-Swiss.
- In communication for Official partnership with Shopify.

Founder of e-Commerce B2C stores
Sept. 2019 – Nov. 2020

CoffeeChem and JUSH Cosmetics
Worldwide

Sole-proprietor for two e-Commerce businesses which involved orchestrating a small team of international business relationships including China, Philippines, USA and Australia related to different business functions.

- Grew a business model that turned over £10,000 profit in 4 consecutive months.
- Facebook advertising algorithm and JUSHCosmetics website sold for approximately £20,000.
- Exposure to Front-end and Back-end web development and developers.

Liverpool University Men's (I) Football Team Committee Leader
Nov. 2017 – May 2019

University of Liverpool
Liverpool, UK

- Organised a £300k fundraiser project for the local community which aims to give disadvantaged students better support in areas such as education and supportive relationships.

Undergraduate Peer Tutor
Oct. 2018 – May 2019

University of Liverpool
Liverpool, UK

- Tutor and Coordinator of the Peer Assisted Learning Scheme for the Department of Chemistry.
- Management of a group of approximately 30 (second to fourth year) students delivering peer-led sessions to first year students.

Amazon Logistics Summer Job
June 2018 – Sep. 2018

Problem Solver
Liverpool, UK

Started with a launch team for a new lightweight warehouse - the first of its kind in the UK – undertaking a variety of roles. The role gave me insight into what it is like to be part of a new team with a common goal but also the complications involved in starting a new team and business and the resilience needed to overcome problems quickly and efficiently.

- Promoted to Problem Solver came from a personally innovated solution to a problem that included planning new locations for incorrectly assigned incoming packages.
- Provide quick solutions to logistical challenges that occurred during the day and implementing changes to communicate the way forward to my peers.

Relevant Technical Skills

Programming Languages: Proficient: Python, C++, Typescript, HTML/CSS, Liquid | Basic: Go, TeX, MatLab
Developer Tools: VS Code, GitHub, AppEngine, Kaggle Kernels, Google Cloud Console, AWS Lambda
Technologies/Frameworks: React, Scikit-learn, Matplotlib, Seaborn, NumPy, Pandas, OpenCV, LaTeX

Technical Projects

Kaggle Competition | *Python, Kaggle Kernels*
- Exposure to exploratory data analysis, feature engineering, model and ensemble building and benefited from open source and collaboration.
- Finished Top 2% of 48,000 teams as a solo on titanic dataset competition. | Kaggle Username: Joshuagornall

2014 British Informatics Olympiad Finalist
- Invited to competition final round hosted at Trinity college, Cambridge where I finished in fifth position.

Sudoku Solver |
- Developed a Sudoku solving tool using stochastic optimisation as an alternative to backtracking algorithms.
- Open source contributors later transformed my tool to a genetic algorithm for their own PhD research via GitHub.