**Michael Southall**

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**Education**

**UNIVERSITY OF SOUTHAMPTON**

**MEng** Electronic and Electrical Engineering. [2:1] 2023

Using Machine Learning to optimise radiative cooling design (in Python) **[Dissertation** grade: 1st Class]

**Final year group project**: Development of Modelling Tool for Power Transmission Export Systems for Offshore Windfarms – working for **KBR Inc**. to optimise CAPEX and OPEX of renewable energy projects.

**Relevant modules**: Machine Learning Technologies (Python, supervised learning and unsupervised learning implementations), Power Generation: Tech and Impact on Society, Advanced Programming (C++)

**LANCING COLLEGE, SUSSEX, UK**

[A Levels: Mathematics, Chinese, Further Mathematics, Economics (A\*, A, B, B), Gold Duke of Edinburgh, STEM Gold Crest Award (Working with engineering consultancy firm - Ricardo Plc).] 2017

**Experience**

**WESTERN POWER DISTRIBUTION (WPD)** BIRMINGHAM, UK

**Power Academy scholar – Electrical engineering intern**  June 2022 – August 2022

Held an IET Power Academy scholarship during my degree. This scholarship was sponsored by WPD. (<https://www.theiet.org/impact-society/awards-scholarships/power-academy/>)

* A month in Network Services team and a month in Primary System Design team.
* Assessment and design of new demand and generation connections.
* Preparation of Connection Offers, budget estimates and feasibility studies.
* Liaison with customers and management of customer connections. June 2021 – August 2021
* Conducted research in a team environment analysing network restoration strategies, leading to best practice and improvement recommendations.
* Attended a two-day Power Academy seminar, which involved conducting research on National Grid’s Net-Zero strategy.

**Ricardo Plc** Shoreham-by-sea

**STEM Gold Crest Award intern**  Part-time during A Levels

* Developed a model of a piston rig for analysing the movement of liquid when a piston oscillates.
* Designed and built a rig which held a transparent acrylic container with a smartphone; designed using CAD software, producing it with a laser-cutter.
* Report writing and presentation delivery to senior engineers at the end of the project.

**Shanghai Optical Essentials Ltd** Shanghai

**Intern**  December 2016 – January 2017

* Worked with head of marketing, and learnt the company’s sourcing methods in Mainland China, and how it exports optical components to Europe.
* Refined the firm’s Standard Operating Procedures Manual.
* Experienced working in China for the first time, which highlighted different working cultures.

**Skills & Interests**

**Technical:** Python (modules: Scikit Learn, NumPy, Pandas, Matplotlib, Natural Language Processing-specific modules), C, C++ [Visit my Github page to look at my coding projects: https://github.com/sanmoyo]

**Language:** Chinese (both Cantonese and Mandarin)

**Interests:** Tennis (University BUCs team), cycling, football, chess (Go, Western), geopolitics, macroeconomics