# Nyal Patel

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A final year student with a keen interest in applying developed skills to data science problems and leveraging AI in industry.

## Education

**University of Southampton**                                           **Sep. 2021 – Jun 2024**
*BEng Mechatronic Engineering*            *On track for 1st class honours (average to date: 83.3%)*
*Modules include:*
*Engineering Management and Law, Fluids and Mechanical Materials, Robotics Systems, Circuits and Systems, Electrical Machines, Engineering Design (group project), Mathematics for Electronics and Electrical Engineering, Mechanical Power Transmission and Vibration, Individual AI with machine learning project and more.*

**The Skinners' School**                                                **Sep. 2014 – Jul. 2021**
*A-Levels*                    *Maths (A\*), Further Maths (A\*), Physics (A\*), Chemistry (A\*)*

## Awards

**EW Bright Sparks Award** | *Highlight the brightest and most talented young engineers in the UK today*        **Oct. 2023**
**University of Southampton Zepler Prize** | *Best performance across all modules*        **Sep. 2023**
**Level 3 Award in Leadership and Management** | *ILM*        **Sep. 2022**
**UKESF Scholarship** | *ZF and UK Electronics Skills Foundation*        **Apr. 2022**
**Arkwright Engineering Scholarship** | *University of York – Dept of Electronic Engineering*        **Sep. 2019**

## Experience

**Portalsys/Harrison Bernstein Ltd**                                    **Jan. 2020 – current**
*IT Consultant*                                                        *Gravesend, Kent*
- Authored and maintained excel VBA code to automate bookkeeping services using self taught **technical programming skills**.
- Explored possibilities of utilizing and implementing AI software into various clients technology stacks to boost efficiency of services.

**ZF**                                                                  **Jun. 2023 – Aug. 2023**
*Associate Engineer*                                                    *Solihull, Birmingham*
- **Enhanced and improved the design** and development of a reusable functional and physical model/architecture for electromechanical brakes, fuel cell compressors, and microdrive systems.
- **Pitched** a prototype universal object/location trackers and design of a wind turbine, emphasizing sustainability and innovation by re-purposing old electronic power steering products.
- Utilising the **agile** methodology, I enhanced the design and testing of a device aimed at demagnetizing out-of-use motor magnets using high currents and magnetic induction.

**NHS**                                                                 **Jan. 2021 – Jan. 2023**
*Healthcare Assistant*                                                  *South East, Kent*
- Acquired **adaptability** skills while working in multiple fast-paced mass vaccination sites throughout the South East of England.
- Adapted to fast-paced environments, collaborating across departments to assist 5000+ patients daily at vaccination sites.

**David Lloyd**                                                         **Jan. 2020 – Oct. 2021**
*Lifeguard*                                                            *Kings Hill, Kent*
- In my role as a lifeguard, I applied my trained skills in water safety and emergency response (CPR and first aid), all while showcasing outstanding member engagement, **teamwork, and adaptability**.

## Technical Skills

**Languages**: English (native), Python, VBA, C
**Tools/Technologies/Frameworks**: MATLAB (Simsacpe, Simulink, Stateflow, ), Word, Excel, Teams, Latex, Xero, Linux, OpenCV, GitHub, NumPy, Scikit-Learn, Jupyter Notebook
**Courses:** Coursera - Machine Learning Specialization from Stanford University *(72hours) MIT EDX Introduction to Computer Science and Programming using Python (10weeks)*

## Leadership / Extracurricular

- Advanced **educational leadership** and **public speaking** skills by organising and running an engineering workshop for 47 students between the ages of 14-17 *(Oct 2023)*.
- Member of the UoS AI society, allowing for further **technical and social** growth by attending various AI workshops and successfully completing technical projects.
- Attended a professional engineering development workshop where I gained skills in **communication, human behaviour** and **negotiation** *(Sep 2023)*.
- Cultivated my **leadership and oratory skills** by instructing and guiding younger students for seven years, while serving as an officer in my school's RAF cadet force and holding a black belt qualification in Tae Kwon-Do.*(2014-2021)*.
- **Mentored** GCSE and A-Level maths, physics and chemistry students.