Durand D'souza

Senior Data Scientist

Expertise working on energy sector data and climate policy in over 30 countries. Passionate about effective use of data to drive policy to tackle the climate crisis and inequality.

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EXPERTISE & SKILLS

`ENERGY ECONOMICS`   `CLIMATE POLICY`   `DATA SCIENCE`   `DATA VISUALISATION`   `WEB DEVELOPMENT`

`MACHINE LEARNING/NLP`   `ECONOMIC ANALYSIS`   `FAST LEARNER`

PROGRAMMING PROFICIENCY

`PYTHON 18 YEARS`   `JAVASCRIPT 9 YEARS`   `R 3 YEARS`   `D3 3 YEARS`   `SQL 2 YEARS`   `SVELTEKIT 1 YEAR`

WORK EXPERIENCE

SENIOR DATA SCIENTIST

Carbon Tracker Initiative

10/2018 - present   📍 London, UK

I lead Carbon Tracker Initiative's Power & Utilities team data & modelling workstream, where I have:

- Led a team of energy modellers, financial analysts and data scientists to develop and maintain python-based technical models to estimate unit-level economics and finances for 95% of global coal capacity and over 50% of global gas capacity.
- Models have powered over a dozen reports on power sectors globally, resulting in numerous headlines and quotes in the media, feeding into global initiatives such as Climate Action 100+ and Powering Past Coal Alliance.
- Developed a bespoke data portal, country and company profiles tools to effectively communicate data and analysis to key audiences.
- Co-authored reports on coal sector decarbonisation in Vietnam and Kazakhstan as well as numerous reports on global gas and coal power.
- Presented alongside energy ministers at COP25; to utility companies and investors, and to other key stakeholders.
- Developed data pipeline for training satellite imagery machine learning models for Climate TRACE.
- Mentored colleagues in programming, data comms, electricity markets and contributed to organisation-wide data strategy. DEI representative.

Data journalist & visualisation designer

Freelance

01/2017 - 09/2018   Nottingham, UK

I researched, designed, coded and wrote two interactive visual essays for **The Pudding** publication. These essays may be found under the titles: *"What 1.2 million parliamentary speeches can teach us about gender representation."* and *"We mapped out the road to gender parity in the House of Representatives"*.

- Worked with the **50:50 Parliament** charity and **The Pudding** to make the articles more compelling and thought-provoking.
- Developed machine learning pipelines and interactive data visualisations, wrote web scrapers for data collection and cleaning.
- Wrote a compelling story tying together analysis and visualisations.
- **Won an Information Is Beautiful silver award.**

PhD Student

Max Planck Insitute for Astrophysics

08/2013 - 04/2016   Munich, Germany

My research focused on modelling the evolution of stars much bigger than our Sun using theoretical astrophysics simulations. The eventual goal was to infer the interiors of stars using lightcurve observations from space telescopes.

- Improved decades-old FORTRAN computational code which solves first and second order differential equations.
- Created new tools for myself and collaborators to manage simulation data and analyse it in detail in a modern environment.
- Studied German to B1 proficiency.

While I eventually decided **not to pursue a doctoral degree** due to various factors, my time at MPA taught me a lot about perseverance in high-stress environments and communication of complex technical problems to stakeholders.

Education

Integrated Masters in Physics with Astrophysics (MPhys) - 1st class

University of Leeds (2009-2013)

A Levels - 3 As (Further Maths, Maths, Physics), B, 2 Cs

The Becket School (2007-2009)

Interests

Tackling climate change and inequality are two of the main challenges that drive me. I enjoy creating bespoke data stories to challenge established narratives and create impactful messages.

In my free time, I enjoy climbing, cycling, cooking, cocktails and coffee.