Elliot Salisbury PhD

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I am a data scientist with 10 years of broad industry and academic experience. As a consultant for the last 7 years I have worked on a wide variety of projects advising senior decision-makers, and coaching staff, developing projects that have large impacts on businesses, society, and the climate. In many of these projects, my role involves guiding projects from their initial concept, through research & development, and deployment into production, and then handing them over to the software engineering team for ongoing maintenance.

WORK EXPERIENCE

Data Science Consultant **Oct. 2017 – Present**

Full-stack Data Scientist

- *Empati* – Developed and patented a carbon emissions tracking system that provides enough accuracy (90%) to grant finance capital the confidence to fund more renewable energy projects backed by secured carbon credits.
- *Ecopetrol* – Achieved a $24-35M uplift in operating revenue of a hydroelectric dam. Used climate, weather, and geospatial data, combined with gaussian processes and monte-carlo simulations, to optimize the electricity generation improving energy security, and price volatility.
- *Shell* – Ensured profit resilience amid changing climate policies. Utilized digital twins and monte-carlo simulations, to forecast the impact of carbon tax changes on profitability, shipping logistics, and commodity prices. Crafted a roadmap for fleet upgrades prioritizing sustainability and minimizing tax liabilities.
- *Carbon solutions exchange* – Created trustworthy nature-based carbon offsets, using deep learning (CNN) on drone imagery and LIDAR to detect and measure the biomass of tree plantations. Measuring growth each year and ensuring the carbon offsets are verifiable. Worked with biologists to create new, scientific allometric equations.
- *Engagetech* – Increased sales team output by 5x. That AI technology was then spun-out into a SaaS solution, granting access to a new market segment and increasing revenue.
- *Kitro* – Reduced restaurants' food waste by up to 60%, and a reduction in expenditure by 2-6%. Created a system that uses human-in-the-loop crowdsourcing, computer vision, and deep learning to classify images of food waste taken by an IoT smart-bin.

Munici-Pal **Sept. 2022 – Present**

Founder

- Created an automated AI system delivering weekly summaries of municipal council proceedings to residents. Leveraging LLMs, speech-to-text, and web scraping, the system generates newsletters detailing the meeting. Uses RAG to facilitate user searches on local political matters and improving democratic literacy.

Microsoft Research **Jun. 2016 – Sept. 2016**

Research Intern

- Investigated LLM hallucinations and what effect they have on a blind user's understanding of imagery on twitter. Created a novel tool to enable the research; conducted a study; won best paper award.

EDUCATION

University of Southampton, UK **Sep. 2013 – Jun. 2017**

PhD in Computer Science and Artificial Intelligence

- 8 papers published in IJCAI, AAMAS, AAAI HCOMP

SKILLS & INTERESTS

- **Languages:** Python, R, SQL, Javascript, HTML, PowerBI, Tableau
- **Familiar Libraries:** Pandas, Scikit, PyWhy, Matplotlib, Pytorch, Tensorflow, OpenCV, Django, Streamlit,
- **Techniques:** LLM, Deep Learning, XGBoost, Causal, Regression, Classification, Clustering, Timeseries
- **Interests:** improv comedy, rock climbing, data-driven art, urbanism