

Profile

As an ex-cosmologist and trained as a physicist, my main drive as a data scientist and machine learning researcher is applying scientific and creative approaches to challenging problems that result in applicable solutions.

To accomplish this, I use tools including but not limited to Bayesian/causal inference, machine/deep learning, hypothesis testing and optimisation. I enjoy communicating on various levels, from stakeholders to technical audiences. Recently this manifested in four well received [Towards Data Science](#) articles on causality and Bayesian statistics and presentations on PyData stages. As an academic I've published five peer-reviewed articles in cosmology as lead contributor resulting in over 940 citations to date ([Google Scholar](#)) and I'm currently drafting a paper on hypothesis testing ([RSS 2024 poster](#)).

I have a permit to work in the UK and Europe.

Skills and Tools

Modelling & Optimisation Machine/deep learning, Bayesian & causal inference, Gaussian processes, hypothesis testing, evolutionary algorithms, Pareto optimisation, design of experiment

Programming Proficient: Python, Git, SQL; Intermediate: R

Communication Presented worldwide to various audiences; stakeholder expectation management.

Writing [Medium/Towards Data Science: @eyal-kazin](#), peer-review astronomical journals.

Mentoring Junior DS mentoring, supervised research; Taught physics & maths on various levels

Experience

Nov 2020- **Senior ML Scientist**, [Zimmer Biomet](#), London, England, (AI Health Tech)

I conduct R&D as well as contribute to design and software development of data and modelling products. Most models use data from wearables and surgical robots to create solutions for orthopaedic surgeons to understand patient recovery. I also lead initiatives for advanced methods like probabilistic modelling and machine learning interpretation to improve stakeholder decision making.

Tools/methods: Python, git, AzureML, machine/deep learning, Bayesian/causal inference, Gaussian processes, optimisation.

Apr 2020-Aug 2022 **Staff Data Scientist**, [Babylon](#), London, England, (AI Health Tech)

I developed R&D solutions to improve the accuracy of the Probabilistic Graph Model diagnosis and triage features. This entailed working with engineers, product managers and clinicians to ensure projects were delivered on time and reporting to stakeholders and SLT. Tools/methods: Python, git, GCP, Bayesian/causal inference, DBT, Looker, Tableau

Apr 2018- **Senior Data Scientist**, [LabGenius](#), London, England, (BioTech - Drug Discovery)

Jan 2020 I conducted R&D, created predictive models and decision optimisation algorithms for antibody data for therapeutic discovery in collaboration with Protein Engineers.

Tools: Python, git, GCP, machine/deep learning, Bayesian inference, Pareto optimisation, Gaussian processes, design of experiment.

- Nov 2014– **Senior Data Scientist**, *Cambridge Analytica*, London, England, (Consulting)
- April 2018 I analysed and modelled consumer data for internal and client-facing projects. Developed projects from the seed idea to implementation and presentation. Co-development of Python repositories (projects and tools). Mentoring junior data scientists and contributions to blog. Tools/methods: Python, git, SQL, R, machine learning, Bayesian inference.
- 2011–2014 **Research Staff Associate**, *Swinburne University of Technology*, Australia
Lead researcher in key analyses of galaxy data sets resulting in five peer-reviewed publications in distinguished astronomy journals, with over 940 citations to date ([Google Scholar](#)).
Tools/methods: Python, C, Bayesian inference, clustering

Education

- 2005–2011 **Ph.D. Physics**, *New York University*, New York, NY, USA
Research in observational cosmology
Dissertation: *Large-Scale Clustering of Galaxies* bit.ly/2uffbuB
- 2001–2004 **B.Sc. Physics**, *Ben Gurion University*, Be'er Sheva, Israel
Graduated with honors

Selected Publications

- [Kazin et. al \(2014\)](#) **Improved distance measurements to $z=1$ with reconstruction of the baryonic acoustic feature** - We demonstrate on real and simulated data that by using velocity fields to shift galaxies to their near-original positions one obtains more accurate estimates of dark matter and dark energy. Cited 420 times (132 since 2019).
- [Kazin et. al \(2010\)](#) **The baryonic acoustic feature and large-scale clustering in the Sloan Digital Sky Survey luminous red galaxy sample** - By using simulations we demonstrate that an apparent abnormality in the real galaxy 2-point clustering is likely to be due to cosmic variance rather than “new physics”. Cited 296 times (38 since 2019).

Selected Outreach Initiatives

- Dec, 2024 **Causality - Mental Hygiene for Data Science**, PyData Global Conference (virtual) [abstract link](#), accompanying article: bit.ly/causal-mental-hygiene
- Sep, 2024 **Don't Stop 'Till You Get Enough - Improved Sequential Hypothesis Testing With “Enhanced Precision Is The Goal”**, Royal Statistical Society International Conference, Brighton UK [abstract link](#), bit.ly/precision-goal-poster
- May, Sept 2021 **Improved Decisions with Pareto Fronts - A Hands-On Introduction to Multi-Objective Optimisation**, PyData Global 2020, PyCon US, Australia recording: bit.ly/moo-youtube-intro, tutorial: bit.ly/improved-decisions-pareto
- Nov 2020 [bit.ly/moo-youtube-intro](#), tutorial: bit.ly/improved-decisions-pareto
- 2014 onwards **Adopt a Physicist** - Student correspondence regarding physics as a career.

Languages

Proficient: English, Hebrew, Conversational: Spanish

Hobbies

Tennis, pingpong, guitar, languages, short film production, basketball, cycling, traveling, surfing. For the past 10 years I have maintained a daily video diary.