

Samuel Hinton

Data Scientist | Software Engineer | Astrophysicist

Contact

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Education

2016–2020	Doctor of Philosophy Bayesian statistics, hierarchical modelling of exploding stars, data and machine learning pipelines to streamline scientific analyses.	University of Queensland
2010–2015	Bachelor of Science (Physics)(Hons, 1 st)	University of Queensland
2010–2014	Bachelor of Engineering (Software)(Hons, 1 st)	University of Queensland

Experience

12/2020–Now	Data Scientist Arenko Group <i>Full-time</i> Implemented MLOps pipelines for data engineering, model versioning and productionising code. Implemented ML models to predict energy markets, and created algorithms to utilise market predictions to produce optimal profit.	London, UK
03/2020 - 09/2020	Lead Data Analyst University of Queensland <i>Part-time</i> Created a data science pipeline for the COVID-19 Critical Care Consortium. Homogenised and standardised heterogeneous medical data for eventual use in causal modelling. Created reports, dashboards, and data products as support for clinical staff.	Brisbane, Queensland, Australia
03/2016 - 11/2020	Astrophysicist University of Queensland <i>Part-time</i> Created data pipelines for international collaborations to run from data preparation to classification, modelling and reports. Created classifiers to discriminate between supernova. Applied high-dimensional modelling techniques on the large-scale-structure in the universe.	Brisbane, Queensland, Australia
04/2019 - Now	Course Instructor SuperDataScience <i>Casual Contract</i> Created courses on statistical analysis and data manipulation in Python for students. Focused on applied statistics and utilisation of modern code packages, with attention given to visual output and workflows for continuous validation of methodology.	Sunshine Coast, Queensland, Australia
Summer 2017	Student Research Fellowship Lawrence Berkeley Laboratory <i>Full-time</i> Solved the challenge of fitting high-dimensional astrophysical models using advanced numerical techniques, allowing more robust calculation of model uncertainty.	California

- 11/2015 - 02/2016 **Research Intern | Gemini & Australian Astronomical Observatory** Chile
Full-time
 Reduced telescope data, engineered features, and applied machine learning techniques to classify extra-galactic candidates for follow up with the Hubble Space Telescope.
- 06/2010 - 09/2014 **Software Developer | GBST** Brisbane, Queensland, Australia
Part-time
 Developed business intelligence reporting solutions for brokerage clients. Designed and developed server and client based web application code, creation of large scale SQL queries. Optimised queries, databases, and applications. Developed back-end server code and front-end web applications to improve reporting.

Noteable Awards

2019	Lindau Nobel Laureate Delegate	Aus rep at LINO19.	Australian Academy of Science
2019	Future Superstar Award	Highest performing PhD student.	University of Queensland
2016	Bok Prize	Best astrophysics honours thesis in Australia.	Astronomical Society of Australia
2016	Australian Postgraduate Award		Australian Government
2016	Science Faculty Graduate of the Year		University of Queensland
2016	Australian Institute of Physics Prize	Top physics graduate.	University of Queensland
2016	University Medal (Science)		University of Queensland
2015	University Medal (Engineering)		University of Queensland

Other awards available on request.

Skills

- Languages:** Python, C, C++, Javascript, SQL, Java, Stan, Git.
- Techniques:** Machine learning, Numerical Optimisation, Visualisation, Bayesian Statistics, Model discrimination, Pipelines.
- Communication:** Numerous podcast appearances in areas of Data Science, comedy, astrophysics, reality TV. Experience communicating complex topics effectively in radio, TV (recorded + live), public lectures and presentations.
- Publications:** 6 first author, 75+ contributing author. Areas of software, statistics, astrophysics, medicine.