

# Samuel Hinton

Data Scientist | Software Engineer | Astrophysicist

## Contact

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## Education

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

## Experience

03/2020 - Now	<b>Lead Data Analyst   University of Queensland</b> <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
01/2020 - Now	<b>Astrophysicist   University of Queensland</b> <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	<b>Course Instructor   SuperDataScience</b> <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	<b>Student Research Fellowship   Lawrence Berkeley Laboratory</b> <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	<b>Research Intern   Gemini &amp; Australian Astronomical Observatory</b> <i>Full-time</i> Reduced telescope data, engineered features, and applied machine learning techniques to classify extra-galactic candidates for follow up with the Hubble Space Telescope.	Chile

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	<b>Future Superstar Award</b>	Highest performing PhD student.	University of Queensland
2016	<b>Bok Prize</b>	Best astrophysics honours thesis in Australia.	Astronomical Society of Australia
2016	<b>Australian Postgraduate Award</b>		Australian Government
2016	<b>Science Faculty Graduate of the Year</b>		University of Queensland
2016	<b>Australian Institute of Physics Prize</b>	Top physics graduate.	University of Queensland
2016	<b>University Medal (Science)</b>		University of Queensland
2015	<b>University Medal (Engineering)</b>		University of Queensland

Other awards available on request.

## Skills

<b>Languages:</b>	Python, C, C++, Javascript, SQL, Java, Stan, Git.
<b>Techniques:</b>	Machine learning, Numerical Optimisation, Visualisation, Bayesian Statistics, Model discrimination, Pipelines.
<b>Communication:</b>	Experience communicating complex topics effectively in radio, TV (recorded + live), public lectures and presentations.
<b>Publications:</b>	6 first author, 45+ contributing author. Areas of software, statistics, astrophysics.