Samuel Hinton

B.E. Software Engineering (Hon), B.Sc Physics (Hon)

Contact

30 Matingara St
Chapel Hill, QLD 4069
Australia

+61 424 670 574

samuelreay@gmail.com
Github
Personal

References available on request.

Programming

JavaScript,
HTML5 & CSS3
Python, Java
C, C++, Matlab
SQL, LaTeX

Bash, SVN, Git,
Maven, Node.js,
AngularJS

Interests

astrophysics
cosmology
computational physics
science communication
software design

Communication

2016
University Tutoring
Science Demo Troupe
2015
College Tutoring
Honours student address
High school astronomy talk
2014
Physics Review Representative
5-Minute Physics
2010
Professional Tutoring

Education

2010–2015 **Bachelor of Engineering** (Software) — University of Queensland
Awarded 1st class honours and graduated top of engineering cohort. Undergraduate engineering thesis entailed writing the web-application Marz to redshift spectra from the AAOmega spectrograph for the OzDES team.

2010–2016 **Bachelor of Science** (Physics) — University of Queensland
Awarded 1st class honours and graduated top of science cohort. Thesis project investigated the 2D BAO signal found in the final Wigglez dataset to constrain cosmological parameters.

Experience

2010–2014 **GBST** — Brisbane, Queensland, Australia
Software Developer
Developed business intelligence reporting solutions for clients, designing and developing server and client based web application code, creation of large scale SQL queries, experience optimising queries, databases and applications for network, processing and memory constraints, developed back-end server code and front-end web applications. Prioritised implementation tasks for strict release schedules, delegated work tasks for other developers and reviewed incoming work for quality.

2015–2016 **Gemini & Australian Astronomical Observatory** — La Serena, Chile
Research Intern
Internship for the Australian Gemini Undergraduate Summer Studentship. Utilised photometric data of Maffei 1 to determine globular cluster candidates and their properties for spectroscopic follow-up. Utilised data reduction pipelines, automated analysis methods in Python, and applied machine learning techniques to perform object classification.

2016–Now **Lawrence Berkeley National Laboratory** — Berkeley, California
Research Fellowship
Research fellowship at LBNL to work on Bayesian Hierarchical Modelling and its applications to Supernova Cosmology. Specifically, investigating how to use high dimensional hierarchical models to model individual supernova instead of populations to provide better constraints on cosmology using supernova discovered by the Dark Energy Survey.

Awards

2016 **Bok Prize** Outstanding research in Astronomy — Astronomical Society of Australia
2016 **Australian Postgraduate Award** — Australian Government
2015 **Science Faculty Graduate of the Year** — UQ
2015 **University Medal (Science)** — UQ
2015 **Australian Gemini Undergraduate Summer Studentships** — AAO
2015 **A.W. Oakes Scholarship** — St John's College

2015 **AAO Honours Scholarship** Australian Astronomical Observatory
2015 **Harriet Marks Bursary** UQ
2015 **Australian Institute of Physics Prize** UQ
2015 **Rhodes Scholarship Finalist** Oxford University
2015 **10x Deans Commendation** UQ
2015 **Helen Thompson Prize for All Round Excellence** St John's College
2014 **University Medal (Engineering)** UQ
2014 **David Andrew Krnak Memorial Prize** Top graduating engineering student. UQ
2014 **UQ Future Leader** UQ
2014 **IEEE Student Thesis Prize** IEEE
2014 **IET Student Prize** The Institution of Engineering and Technology
2014 **GroundProbe Prize** UQ
2014 **RWH Hawken Scholar** (2010–2014) Awarded to highly performing students UQ
2014 **UQ Summer Research Scholarship** UQ
2012 **Exxon Mobil Achievement Award** Top mechanical engineering student. UQ
2011 **Alstom Prize** Top electrical engineering student. UQ
2011 **Walter Bruce Darker Scholarship** Top 3rd year engineering student. UQ
2010 **UQ Academic Excellence Scholarship** UQ
2010 **ICT Enabling Scholarship** UQ
2010 **John Black Prize** Highest performing first year male. UQ
2009 **OP1** Highest possible secondary education exit score. QTAC

Publications

The 2-degree Field Lensing Survey: design and clustering measurements
Blake, C. et al.
ArXiv e-prints *(Aug. 2016). 2016*

ChainConsumer
Hinton, Samuel
JOSS *1.4 (Aug. 2016). The Open Journal, 2016*

Measuring the 2D Baryon Acoustic Oscillation signal of galaxies in WiggleZ: Cosmological constraints
Hinton, Samuel R. et al.
Monthly Notices of the Royal Astronomical Society *(Oct. 2016) stw2725. Oxford University Press (OUP), 2016*

Marz: Manual and automatic redshifting software
Hinton, S.R. et al.
Astronomy and Computing *15 (2016) pp. 61–71. 2016*

Discovery of a z=0.65 Post-Starburst BAL Quasar in the DES Supernova Fields
Mudd, D. et al.
ArXiv e-prints *(June 2016). 2016*

OzDES multifibre spectroscopy for the Dark Energy Survey: first-year operation and results
Yuan, F. et al.
MNRAS *452 (Sept. 2015) pp. 3047–3063. 2015*