

Husni Almoubayyed

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CONTACT & LINKS

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PROGRAMMING

Wrote & published reviewed libraries:

• Python • C/C++ • Unix/Shell • \LaTeX

Experienced:

• Matlab • Javascript • Mathematica •
CSS • HTML • R

GRANTS & AWARDS

• Royal Astronomical Society (RAS)
Fellowship (2015 – Present)
• Grants from Stanford/KIPAC (2017),
LSST Corporation (2017), CMU Provost's
Office (2017), RAS (2015)

OUTREACH

Pittsburgh Hack Hour
Organizer (2017 – Present (biweekly))
TheGIST Magazine
Specialist Editor (2015 – Present)
Science Connects
STEM Ambassador for West of Scotland
(2015 – 2016)
Glasgow Science Festival
Official Media Reporter (2015)
UKSEDS
Assistant Officer (2015 – 2016)
WikiProject Physics
Contributor (2015 – Present)

WORKSHOPS & COMPETITIONS

HACK-A-STARTUP 2017 – RUNNER-UP
Oct 2017 | Tepper School of Business, CMU
Worked on Optipik, a CMU startup that uses Deep
Learning (ConvNets) for photo optimization.

**OATH/VERIZON DISCOVERY CHATBOT HACKATHON –
GRAND PRIZE WINNER**
Oct 2017 | CMU, Pittsburgh, PA
Created a chatbot incorporating Natural Language Processing
and neural networks to make movie recommendations.

EDUCATION

CARNEGIE MELLON UNIVERSITY
PHD IN PHYSICS

Fall 2016 – Present
PITTSBURGH, PA, USA.

UNIVERSITY OF GLASGOW

BSc (HONS) IN PHYSICS AND ASTROPHYSICS, WITH HONOURS OF THE
FIRST CLASS. GPA: 4.0/4.0

Fall 2012 – Spring 2016
GLASGOW, SCOTLAND, UK.

EXPERIENCE

CARNEGIE MELLON UNIVERSITY

Sep 2016 – Present

GRADUATE RESEARCHER | LARGE SYNOPTIC SURVEY TELESCOPE (LSST)

- Writing Python libraries/metrics to measure impact of PSF modeling errors on weak lensing shear signal to give feedback on algorithms for the LSST (largest galaxy survey in history – 10s of billions of galaxies).
- Worked on numerically validated Core Cosmo Library (Python & C++).

GRADUATE TEACHING ASSISTANT

- Led recitations, wrote programming labs (Python), held office hours.
- Participated in CMU's Eberly Teaching Excellence center.
- Rated consistently > 1 standard deviation above dept average.

UNIVERSITY OF GLASGOW

Sep 2015 – May 2016

UNDERGRAD RESEARCHER | LASER INTERFEROMETER GRAVITATIONAL
WAVE OBSERVATORY (LIGO)

- Worked on '17 Nobel Prize-winning project, co-authored 2 journal papers, presented a talk (U. Glasgow) and a poster (U. Southampton).
- Used Bayesian inference to set upper limits on GW signal from the Sun using time-series datasets (~1.5 yrs of data).

UNDERGRADUATE TEACHING ASSISTANT

DURHAM UNIVERSITY

May 2015 – Aug 2015

UNDERGRADUATE RESEARCHER | DARK ENERGY SPECTROSCOPIC
INSTRUMENT (DESI)

- Wrote parallelized modules in C & Python to mitigate bias in galaxy clustering due to redshift incompleteness caused by fiber collisions.
- Published results (talk) at CosPA '15 Symp. (KAIST, Daejeon, S. Korea)

RED BULL HACK THE HITS – FINALIST AWARD

Nov 2017 | San Francisco, CA
Built a music-making graphical tablet with visual representation.

LSST CORPORATION HACK WEEK

Jul 2017 | Fermi National Lab, Batavia, IL
Built MCMC analyses for Core Cosmology Library.

NEXT GEN COMP MODELING SUMMER ACADEMY

Jun 2016 + Jun 2015 | U. Southampton, Southampton, UK
Worked on pandas & scikit-learn (Python); CUDA (GPUPP in C)