

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

See Github (link above) for examples

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

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.

CITADEL LLC/CORRELATION ONE DATATHON

Sep 2017 | CMU, Pittsburgh, PA

In <7 hours, I used big datasets to create a Bayesian model to predict posterior probability of cancer from DNA expression.

Interested in Data Science opportunities for Summer '18.

EDUCATION

CARNEGIE MELLON UNIVERSITY

Fall 2016 – Present

PHD IN PHYSICS

Pittsburgh, PA, USA.

UNIVERSITY OF GLASGOW

Fall 2012 – Spring 2016

BSc (HONS) IN ASTROPHYSICS, WITH HONOURS OF THE FIRST CLASS

Glasgow, Scotland, UK. GPA: 4.0 / 4.0

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)

LSST CORPORATION HACK WEEK

Jul 2017 | Fermi National Lab, Batavia, IL

Wrote Core Cosmology Library code, particularly MCMC likelihood analyses. **NEXT GEN COMPUTATIONAL**

MODELING SUMMER ACADEMY

Jun 2016 + Jun 2015 | U. Southampton, Southampton, UK

Presented poster. Worked on pandas & scikit-learn (Python); CUDA (GPUPP in C)