Husni Almoubayyed

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CONTACT & LINKS

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PROGRAMMING

Wrote & published reviewed libraries:
• Python • C/C++ • Unix/Shell • LaTeX
• Matlab • Javascript • Mathematica

GRANTS & AWARDS

• Royal Astronomical Society (RAS) Fellowship (2015 − Present)
• Grants from Stanford/KIPAC (2017, 2018),
LSST Corporation (2017), CMU Provost's Office (2017), RAS (2015, 2017)

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
Offical Media Reporter (2015)
UKSEDS
Assistant Officer (2015 − 2016)
WikiProject Physics
Contributor (2015 − Present)

EDUCATION

CARNEGIE MELLON UNIVERSITY — Fall 2016 − Present
PhD in Physics — PITTSBURGH, PA, USA.

UNIVERSITY OF GLASGOW — Fall 2012 − Spring 2016
BSc (Hons) in Physics and Astrophysics, with Honours of the First Class. — GLASGOW, SCOTLAND, UK.

EXPERIENCE

CARNEGIE MELLON UNIVERSITY — Sep 2016 – Present
GRADUATE RESEARCHER | LARGE SYNOPTIC SURVEY TELESCOPE (LSST)
- Writing Python libraries/metrics to create an optimal 10-year strategy for the LSST (largest galaxy survey in history – 10s of billions of galaxies), and leading Weak Lensing working group survey strategy efforts.
- Worked on numerically validated Core Cosmo Library (Python & C++).

GRADUATE TEACHING ASSISTANT (2016−2017)
- Won Best TA Award for 2016−2017 academic year

UNIVERSITY OF GLASGOW — Sep 2015 – May 2016
UNDERGRADUATE 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 ($\sim$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)

WORKSHOPS & COMPETITIONS

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.

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 optimzation.

RED BULL HACK THE HITS − FINALIST AWARD
Nov 2017 | San Francisco, CA
Built a music-making (in Python) graphical tablet with visual representation (in Processing.JS).

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.