Husni Almoubayyed

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CONTACT & LINKS

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PROGRAMMING

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

GRANTS & AWARDS

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

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 (CNNs) 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.