

# In Sung Jang

## Qualification Summary

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Analytical and research-oriented individual with strong aptitude for conducting quantitative research and transforming raw data into beneficial insight. Astute at designing / implementing end-to-end data solutions that combine efficient processing, complex querying capabilities, and insights extraction. Superb efficiency for coordinating development of trading / valuation strategies and spearheading research projects. Tech-savvy individual with academic / cultural backgrounds; ability to interpret data / coordinate with teams to solve business problems. Skilled collaborator, equipped with Ph.D. degree and meaningful publications / citations experience; capable of resolving modern issues by applying statistical techniques.

## Areas of Expertise

- |                                  |                                   |                                  |
|----------------------------------|-----------------------------------|----------------------------------|
| ▣ Research & Analysis            | ▣ Data Analysis & Management      | ▣ Project Coordination           |
| ▣ Statistical Modeling           | ▣ Solutions Implementation        | ▣ Data Evaluation & Coordination |
| ▣ Strategic Planning & Execution | ▣ Data visualization & Structures | ▣ Cross-team Collaboration       |

## Professional Experience

### University of Chicago, Astronomy Sr. Postdoctoral Researcher

2020 – Present

Create pipelines to simultaneously process massive astronomical images (Python and IDL). Evaluate time-series photometric data by developing linear and non-linear regression routines. Determine signals / patterns in the large source catalogs ( $N > 1\text{million}$ ) by utilizing statistical methods.

- Reduced systematic errors up to 2% (from 10%) by improving flux measuring algorithms.
- Collaborated on over 10 scientific publications / authored over 1000 combined citations by liaising with leading group.
- Achieved Hubble Space Telescope research grants ( $>200$  orbits, \$250K, incl. PI programs).
- Minimized data processing time up to 70% by building data reduction pipelines for astronomical survey data ( $>1\text{TB}$ ).

### Leibniz-Institut für Astrophysik Potsdam (Germany) Postdoctoral Researcher

2016 – 2020

Leveraged super-computers to derive photometric properties through non-linear 2D model fits. Implemented statistical methods to quantify stellar flux. Performed in-depth research on complex issues and provided best possible solution. Compiled and maintained documentation accurately.

- Delivered presentation at five international conferences and collaborated on over 10 scientific publications.
- Conducted statistical analyses of large astronomical data sets to identify patterns and structures, analyzing  $>1$  million sources per project.
- Led 30% improvement in accuracy by executing statistical methods to quantify stellar flux above noisy background levels.
- Ensured successful completion of over eight projects within defined budget and time by liaising with teams.

## Education

**Ph.D. in Astronomy & Astrophysics**, Seoul National Univ., South Korea 2016

**Master of Science in Astronomy & Astrophysics**, Seoul National Univ., South Korea 2011

**Bachelor of S. in Aerospace Engineering**, Inha Univ., South Korea 2009

## Publications

42 peer-reviewed journal articles with  $>1900$  citations (top 5% of Ph.D. graduates in 2016)

11 first-author articles with  $>300$  citations

## Technical Proficiencies

Python, LaTeX, IDL, SQL, Linux, and machine learning