

# Yunjie He (Roya)

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## EDUCATION

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### MSc Computational Statistics and Machine Learning, University College London

Sep 2020 - Sep 2021

Department of Computer Science

London

- Grade: Distinction
- Core Modules: Supervised Learning, Probabilistic and Unsupervised Learning, Approximate Inference, Statistical Models and Data Analysis, Statistical NLP, Applied Machine Learning, Reinforcement Learning, Machine Learning Seminar.
- In-course NLP project: Discovering the Effectiveness of Pre-trained Masked Language Model for English Spelling Correction
- MSc project supervised Dr. Philip Gorinski: Truly Hierarchical Graph Network for Multi-Hop Question Answering system with hierarchical graph attention network.

### BSc Economics and Statistics, University College London

Sep 2017 - Jun 2020

Department of Statistical Science

London

- Grade: First Class Honours
- Related modules: Advanced Linear Algebra, Calculus, Matrix, Stochastic System, Statistical Inference, Probability and Statistics

## RESEARCH EXPERIENCE

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### HUAWEI Noah's Ark Lab - NLP group

Jun 2021 - Present

Research Intern supervised by Dr. Philip Gorinski

London

- Researched into the Multi-hop machine reading comprehension(QA) task, Graph Neural Networks and their related applications in downstream tasks, especially the question answering problem.
- Re-constructed the graph structure in the HGN model by introducing question2sentence edges and leveraged the influence of graph structure on the model performance.
- Proposed hierarchical graph nodes updating mechanism for the graph attention network (GAT) in the Multi-hop Question Answering task based on the HGN (Hierarchical Graph Network) model.

### Alan Turing Institute

Jun 2019 - Sep 2019

Research Assistant supervised by Dr. Franz Kiraly

London

- Engaged in the Machine Learning Toolbox Design project aimed to build Object-Oriented Programming based interface framework for statistical distributions and machine learning algorithms applications in R
- Contributed to the design of the mlrpro and Distr6 toolbox based on knowledge of mlr3, skpro, and mathematical theory including Bayesian modelling in mlrpro and MCMC in mlrpro, BUGS, JAGS, Stan

### Kaggle Competition in ASHRAE Energy Predict | Ranking:top 1%

- Applied machine learning and deep learning to fraud detection & energy cost problems in Python
- Completed the individual part of EDA; polished feature engineering part; employed machine learning models for data prediction; and used Bayesian optimization for parameter tuning

## PROFESSIONAL EXPERIENCE

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### HUATAI Technology co., Ltd

Jun 2020 - Aug 2020

Big Data Analyst Intern

- HUATAI, a fast-growing data tech startup, commits to provide data-driven professional business suggestions to clients. I worked as part of the big data team to perform exploratory and statistical analysis to reveal trends, understand user behaviors and draw insightful conclusions on the performance of products with the help of big data analytical tools, such as Hadoop, Hive, and Python

### African Healthcare Organization

Jan 2019 - May 2019

Part-time Data Analyst, Volunteer

London

- Used statistical models to extract data needed, assessed its quality, and determined the underlying social meaning
- Performed additional final data screening reports based on analysis and presented to the director

### Rshiny app

UCL, London

developer&maintainer

- Optimized space utilization of the Statistical Science Department at UCL by creating a web-interactive Rshiny app for office use information.
- Realized a connection between online SQL database and Rshiny app and made use of the collected information for statistical analysis using R.

## SKILLS LIST

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