DAVID ZHANG

TBA

🎓 EDUCATION

Present | 2017

Research assistant, part-time PhD, Bioinformatics
University College London 📍 London, UK

· **Thesis**: Using transcriptomics to improve the diagnosis rate of rare disease patients.
· Ultimately, the goal of my PhD is to develop and apply statisical methods and software that improve the genetic diagnosis rate using RNA-sequencing. This involves detection of aberrant RNA-level events when complemented with, DNA sequencing help to resolve variants of unknown significance.

2016 | 2015

MSc, Neuroscience
University College London 📍 London, UK

· **Thesis**: The role of mitochondrial dysfunction in Xerodoma pigmentosum
· **Grade**: Merit (68%)
· Awarded post-graduate support scheme bursary (£10,000)

2015 | 2012

BSc, Biomedical science
University College London 📍 London, UK

· **Thesis**:
· **Grade**: 2:1 (69%)

2012 | 2007

H.S.
Queen Elizabeth's School 📍 Barnet, UK

· **Grade**: Maths (A*), Biology (A*), Chemistry (A*), Sociology (A).

💻 RESEARCH EXPERIENCE

2020

Honorary Researcher (2 months)
Johns Hopkins Bloomberg School of Public Health 📍 Remote

· In collaboration with Leonardo Collado-Torres[1], we used the recount3[2] dataset and LIBD samples to study the effect of complex splicing in individuals with neurological disease.

2017 | 2016

Research Technician
University College London 📍 London, UK

· Used R and bash to investigate the effect of genetic variation on the age of onset of dementia and cognition within Down syndrome patients.

View this CV online with links at *dzhang32.github.io/cv/*

CONTACT

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🐦 dyzhang32
○ dzhang32
in david-zhang32

LANGUAGE SKILLS

| R |
| Bash |
| Git/GitHub |
| Python |

💼 INDUSTRY EXPERIENCE

2020

Bioinformatician internship (3 months)
Verge Genomics

📍 Remote

· Detection of aberrant splicing events in complex disease patients.

📈 SOFTWARE & PROGRAMMING

Present
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2020

Bioconductor packages

· dasper[3]: detection of aberrant splicing events in RNA-sequencing. Author and maintainer. XXX downloads.
· megadepth[4]: BigWig and BAM related utilities. An R wrapper for the megadepth[5] software developed. Co-author and maintainer. XXXX downloads.

2021

Chess analysis

· Applying python and data science principles through the analysis[6] of chess data.

2021
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2020

Advanced R

· Notes and answers to the advanced R[7] book in the form of a bookdown[8].

2020

Kaggle town

· Organised club to study python and machine learning through kaggle[9] problems.

2018
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2016

Data wrangling
Neuroimmunology & CSF Laboratory, NHS

📍 London, UK

· Developer and maintainer of data wrangling pipelines that improved the efficiency and standardisation of monthly financial reports.

🖥 TEACHING EXPERIENCE

2020

Developing Bioconductor Packages
University College London

📍 Virtual Event

· Hosted workshop[10] on best practices for developing Bionconductor using biocthis[11]

2020

Unit testing using testthat edition 3
rstats club

📍 Virtual Event

· Talk[12] regarding unit testing fundamentals, the importance of testing and new features released in the R package testthat edition 3.

2020
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2018

R fundamentals
Clinician Coders   London, UK

· Developed materials[13] and lead facilitator for teaching R to clinicians.

2020
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2017

RNA-sequencing for diagnostics
Kings College London   London, UK

· Invited lecturer to graduate level students on how transcriptomics can
  be applied in the diagnostic pipeline.

SELECTED PUBLICATIONS

2020

Megadepth: efficient coverage quantification for BigWigs and BAMs
Bioinformatics

· Authored with Richard Single, Vanja Paunic, Mark Albrecht, and Martin
  Maiers.

LINKS

1: http://lcolladotor.github.io/cv/
2: http://bioconductor.org/packages/release/bioc/html/recount3.html
3: https://bioconductor.org/packages/release/bioc/html/dasper.html
4: https://bioconductor.org/packages/release/bioc/html/megadepth.html
5: https://github.com/ChristopherWilks/megadepth
6: https://github.com/dzhang32/chess
7: https://adv-r.hadley.nz
8: https://dzhang32.github.io/advanced_R/
9: https://github.com/dzhang32/kaggling
10: https://dzhang32.github.io/biocthis_workshop/
11: https://bioconductor.org/packages/release/bioc/html/biocthis.html
12: https://youtu.be/ClAin7vTwq0
13: https://github.com/ClinicianCoders/ClinicianCoders