DAVID ZHANG

TBA



EDUCATION

Present 2017

Research assistant, part-time PhD, Bioinformatics

University College London

Q 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

O 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

Q London, UK

- · Thesis:
- · Grade: 2:1 (69%)

2012 2007

H.S.

Queen Elizabeth's School

Parnet. 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-Torres¹, we used the recount 3² dataset and LIBD samples to study the effect of complex splicing in individuals with neurological disease.



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

CONTACT

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in david-zhang32

LANGUAGE SKILLS

R	
Bash	
Git/GitHub	
Python	

Made with the R package pagedown.

The source code is available on github.com/dzhang32/cv.

Last updated on 2021-02-24.

Research Technician 2017 **Q** London, UK University College London 2016 \cdot Used R and bash to investigate the effect of genetic variation on the age of onset of dementia and cognition within Down syndrome patients. INDUSTRY EXPERIENCE Bioinformatician internship (3 months) 2020 Remote Verge Genomics · Detection of aberrant splicing events in complex disease patients. · Using AWS infrastructure SOFTWARE & PROGRAMMING Present

Bioconductor packages

- · dasper³: detection of aberrant splicing events in RNA-sequencing. Author and maintainer. XXX downloads.
- · megadepth⁴: BigWig and BAM related utilities. An R wrapper for the megadepth⁵ software developed. Co-author and maintainer. XXXX downloads.

Chess analysis 2021

2020

2020

2020

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

Advanced R 2021

• Notes and answers to the advanced R⁷ book in the form of a bookdown⁸.

Kaggle town

· Organised club to study python and machine learning through kaggle⁹ problems.

Data wrangling
Neuroimmunology & CSF Laboratory, NHS
Developer and maintainer of data wrangling pipelines that improved the efficiency and standardisation of monthly financial reports.

TEACHING EXPERIENCE

Developing Bioconductor Packages
University College London
Hosted workshop¹⁰ on best practices for developing Bionconductor using biocthis⁷¹

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 • R fundamentals

2020

2018

2020

Clinician Coders Q London, UK

• Developed materials 13 and lead facilitator for teaching R to clinicians.

2020 • 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.



Megadepth: efficient coverage quantification for BigWigs and BAMs
Bioinformatics

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



- 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