

KASIA KEDZIERSKA

I am a PhD student at the University of Oxford. As a computational biologist, I use Data Science and Machine Learning to answer biological questions. Specifically, I study cancer of the uterus and chromatin organisation in disease progression. Last summer, I joined Computational Biology Department at Novo Nordisk Research Centre in Oxford as an intern, where I was working with NLP methods and knowledge graphs.

View this CV online on kasia.codes/cv/

RESEARCH EXPERIENCE

- 2021 • **Intern**
[Novo Nordisk Research Centre Oxford](#) 📍 Oxford, United Kingdom
- I used NLP based methods to screen biomedical articles and identify potential therapeutic targets. I built R Shiny App to allow colleagues within the company to investigate results from our pipeline.
- present | 2018 • **DPhil Candidate**
Mentored by [D. Church](#) and [D. Woodcock](#) 📍 University of Oxford, UK
- PhD project: *Functional and evolutionary characterisation of chromatin organisation in endometrial cancer*
- 2018 | 2017 • **Visiting Graduate Student**
[Ratan](#) group 📍 University of Virginia, USA
- Developed [SONICS](#) - a tool for genotyping short tandem repeats (STRs) profiled using capture assays.
 - Worked on the Master thesis - *Analysis of the mutational burden across gene sets in cancer*.
- 2017 | 2016 • **Visiting Graduate Student**
Pemberton group 📍 University of Virginia, USA
- Worked on Epigenetic regulation in prostate cancer.
 - Performed experiments and analyzed data from RNA-seq, ATAC-seq, and ChIP-seq assays.
- 2016 | 2015 • **Research Assistant**
[Zebrafish Developmental Genomics](#) 📍 [IIMCB](#), Warsaw, Poland
- I worked on the project: *Elucidating gene regulatory network of zebrafish heart development using genomics*.
 - I was responsible for both computational and experimental aspects of the project.



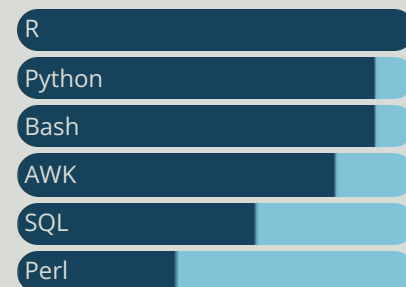
EDUCATION

- present | 2018 • **DPhil. Candidate, Genomic Medicine and Statistics**
[Nuffield Department of Medicine, Brasenose College](#) 📍 University of Oxford, UK
- PhD fully funded by [Wellcome Trust Four-year PhD Studentships in Science](#)

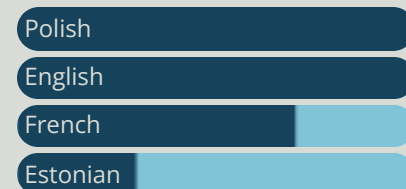
CONTACT

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🐦 [kzkedzierska](https://twitter.com/kzkedzierska)
📄 github.com/kzkedzierska
🌐 kasia.codes
in kzkedzierska

CODING SKILLS



LANGUAGES



Made with the R package [pagedown](#).

Based on the [Nick Strayer's CV package](#); modified source code for this CV is available [here](#).

Last updated on 2022-01-27.

2018
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2015

- **M. Sc. Eng., Biotechnology**
Warsaw University of Technology 📍 Warsaw, Poland
 - Thesis: *Analysis of the mutational burden across gene sets in cancer.*
 - Thesis awarded the best Master thesis in Bioinformatics defended in 2018 title.

2015
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2011

- **B. Sc. Eng., Biotechnology**
Warsaw University of Technology 📍 Warsaw, Poland

PUBLICATIONS

2021

- **Multi-omics analyses of early liver injury reveals cell-type-specific transcriptional and epigenomic shift**
M. Migdal, E. Tralle, K. A. Nahia, L. Bugajski, **K. Z. Kedzierska**, F. Garbicz, K. Piwocka, C. L. Winata, M. Pawlak 📍 BMC Genomics

2020

- **The *MLH1* polymorphism rs1800734 and risk of endometrial cancer with microsatellite instability**
H. Russell, **K. Kedzierska**, D. D. Buchanan, R. Thomas, E. Tham, M. Mints, A. Keränen, G. G. Giles, M. C. Southey, R. L. Milne, I. Tomlinson, D. Church, A. B. Spurdle, T. A. O'Mara and A. Lewis 📍 Clinical Epigenetics

2020

- **Prognostic integrated image-based immune and molecular profiling in early-stage Endometrial Cancer**
N. Horeweg, M. de Bruyn, R. A. Nout, E. Stelloo, **K. Kedzierska**, A. León-Castillo, A. Plat, K. D. Mertz, M. Osse, I. M. Jürgenliemk-Schulz, L. C.H.W. Lutgens, J. J. Jobsen, E. M. van der Steen-Banasik, V. T. Smit, C. L. Creutzberg, T. Bosse, H. W. Nijman, V. H. Koelzer and D. N. Church 📍 Cancer Immunology Research

2019

- **Dynamics of cardiomyocyte transcriptome and chromatin landscape demarcates key events of heart development**
M. Pawlak, **K. Z. Kedzierska**, M. Migdal, K. A. Nahia, J. A. Ramilowski, L. Bugajski, K. Hashimoto, A. Marconi, K. Piwocka, P. Carninci and C. L. Winata 📍 Genome Research

2018

- **Genomic analysis of DNA repair genes and androgen signaling in prostate cancer**
K. Jividen, **K. Z. Kedzierska**, C.-S. Yang, K. Szlachta, A. Ratan and B. M. Paschal 📍 BMC Cancer

2018

- **SONiCS: PCR stutter noise correction in genome-scale microsatellites**
K. Z. Kedzierska, L. Gerber, D. Cagnazzi, M. Krützen, A. Ratan, L. Kistler 📍 Bioinformatics

POSTERS, AND TALKS

2019

- **Analysis of the mutational burden across gene sets in cancer**
Polish Bioinformatics Society Symposium 📍 Cracow, Poland
 - Invited talk

2018

- **Differential mutation analysis across gene sets in cancers**
The Biology of Genomes 2018 📍 Cold Spring Harbor, NY, USA
 - Poster

2017

- **Epigenetic regulation of prostate cancer**
Visiting Graduate Traineeship Program Grantees Symposium 📍 Charlottesville, VA, USA
 - Talk



AWARDS AND HONOURS

present
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2021



Senior Hulme Scholarship

- Senior Hulme Scholarship is awarded by Brasenose College, University of Oxford to DPhil students whose academic performance is deemed to be exceptional.

2019
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2018



Best Master Thesis in Bioinformatics

- *Analysis of the mutational burden across gene sets in cancer* - Best Master Thesis defended in Bioinformatics in 2018 in Poland.

2017
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2016



Visiting Graduate Traineeship Program

- The Visiting Research Graduate Traineeship Program offered 12-month research traineeships for outstanding, qualified students from the life sciences at selected institutions in the United States.

2015



Grasz o Staz

- "Grasz o Staz" competition was a national, prestigious and highly competitive (1:25 success rate) scholarship program in Poland organized by PwC.



TEACHING EXPERIENCE

2021



Data visualization in bioinformatics - hackathon mentor

Online hackathon [NGSprint](#)

📍 Discord

- I led the hackathon in data visualisation with emphasis on computational biology. Under my supervision, 3 teams of around 5 people each, created interactive and captivating visualisation. Teaching materials are available at github.com/kzkdzierska/NGSprint_data_viz.

2020



Online tutorials: Python for Data Science and Introduction to Python

[NGSeminars](#)

📍 YouTube

- I led two Python tutorials: **Introduction to Python** kasia.codes/talk/intro_to_python/ and **Python for Data Science** kasia.codes/talk/py4ds/.

2019



Unsupervised learning, Introduction to Python

#NGSchool2019: [Machine Learning for Biomedicine](#)

📍 Ostróda, Poland

- Tutor for the Introduction to Python (3 h workshop) and for the Unsupervised learning (1,5 h lecture).
- Materials for the Introduction to Python are available on [github](#)

2019



Introduction to R

Wellcome Centre for Human Genetics

📍 Oxford, United Kingdom

- 8 week course in Introduction to R, Data Manipulation, Data Visualisation and RNA-seq data analysis.
- Materials available on [github/kzkdziersa/r_intro](https://github.com/kzkdziersa/r_intro)

2020
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2019



Introduction to Managing Code with Git

Wellcome Centre for Human Genetics

📍 Oxford, United Kingdom

- I led a 2-hour introduction to working with Git. Materials, including slides and exercises are available at kasia.codes/talk/into_to_git/.

2017



ATAC-seq workshop

[#NGSchool2017: Single-cell Sequencing](#)

📍 Jachranka, Poland

- Invited speaker
- Materials for the course can be available on github.com/kzkedzierska/ATACseq_workshop



ATTENDED WORKSHOPS, SUMMER SCHOOLS

2019



Machine Learning Summer School

Imperial College London, University College London

📍 London, United Kingdom



GRANTS

2022

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2020



Visegrad Grant to organize [#NGSchool2020 postponed until 2022](#)

[Visegrad Fund](#)

- 32,190 EUR awarded towards organising affordable summer school focusing on ML application in CompBio. Due to COVID-19 pandemic we organised a virtual events in 2020 & 2021 and are planning in person summer school and conference in 2022.

2019



Visegrad Grant to organize [#NGSchool2019](#)

[Visegrad Fund](#)

- 23,500 EUR awarded towards organising #NGSchool2019 allowed to keep the cost of attending the school to the minimum and record the lectures for broader access.



NON PROFIT WORK

2021

|
2018



President

[NGSchool Society](#)

- The goal of the Society is to promote and support science, with emphasis on computational biology.
- President since 2019; Vice President 2018 - 2019