KASIA KEDZIERSKA

I am a 3rd year PhD student at the University of Oxford. I am a computational biologist, i.e., I use Data Science and Statistical Machine Learning to answer biological questions. Specifically, I study cancer of the uterus and chromatin organisation in disease progression.

RESEARCH EXPERIENCE

2022 | 2018

DPhil Candidate

Wedge group and Church group — 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

2022 | 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

2018 | 2015

M. Sc. Eng., Biotechnology

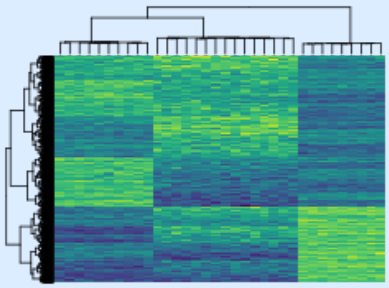
Warsaw University of Technology — Warsaw, Poland

- Thesis: *Analysis of the mutational burden across gene sets in cancer.*
- Thesis awarded the best Master thesis in Bioinformatics defended in 2018 title.

2015 | 2011

B. Sc. Eng., Biotechnology

Warsaw University of Technology — Warsaw, Poland



View this CV online on kasia.codes/cv/

CONTACT

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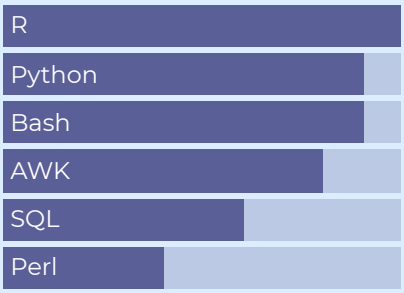
- kzkedzierska
- github.com/kzkedzierska
- kasia.codes
- kzkedzierska

CODING SKILLS



*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 2021-02-23.

PUBLICATIONS

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

2019 | 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 | 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

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/.

2020 | 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/.

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/kzkedziersa/r_intro

2017

ATAC-seq workshop

#NGSchool2017: Single-cell Sequencing — Jachranka, Poland

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

ATTENDED WORKSHOPS, SUMMER SCHOOLS

2019

Machine Learning Summer School

Imperial College London, University College Londn — London, United Kingdom

I like teaching and deeply believe in Open Science. With #NGSchool Society which I'm the president of, I've been organising Summer Schools in Bioinformatics. During #NGSchool2019: Machine Learning for Biomedicine we recorded and published some of the lectures. Nowadays, because of the pandemic, we switched to organising virtual events - NGSeminars series. We made all the content publicly available.

€ GRANTS

2021 | 2020

Visegrad Grant to organize #NGSchool2020 – postponed until 2021

Visegrad Fund

- 32,190 EUR awarded towards organising #NGSchool2020 and #NGSymposium. Both events are postponed until 2021.

2019

Visegrad Grant to organize #NGSchool2019

Visegrad Fund

- 23,500 EUR awarded towards organising #NGSchool2019 allowed to keep the cost of attenting 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