KASIA KEDZIERSKA

I am a 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. Currently, I joined Computational Biology Department at Novo Nordisk Research Centre in Oxford as an intern, where I am working with NLP methods and knowledge graphs.

SELECTED RESEARCH EXPERIENCE

2021

Intern

Novo Nordisk Research Centre Oxford — Oxford, United Kingdom

- I am applying NLP based methods to screen biomedical artciles and identify potential therapeutic targets.

present | 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*.

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

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.

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CONTACT

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kasia.codes
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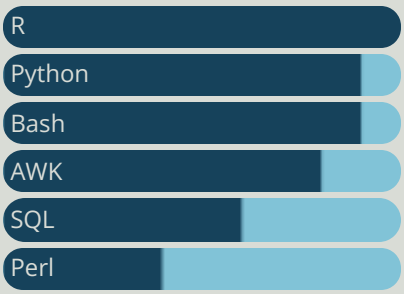
CODING SKILLS



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 2021-10-03.

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

SELECTED TALKS AND POSTERS

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

SELECTED AWARDS AND HONOURS

2022 | 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 | 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.

ATTENDED WORKSHOPS, SUMMER SCHOOLS

2019 **Machine Learning Summer School**
Imperial College London, University College Londn
London, United Kingdom

TEACHING EXPERIENCE

2021 **Data visualization in bioinformatics - hackathon mentor**
Discord

- I led the hackathon in data viusalisation with emphasis on computational biology. Under my supervision, 3 teams of areound 5 people each, created interactive and captivating visualisation to guide audience through results for selected cancer type. Teaching materials

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/kzkedziersa/r_intro

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/.

SELECTED GRANTS

present | 2020 **Visegrad Grant to organize #NGSchool2020 postponed until 2022**
Visegrad Fund

- 32,190 EUR awarded towards organising #NGSchool2020 and #NGSymposium. Due to COVID-19 pandemic we organised a virtual events in 2020 & 2021 and are planning in person summer school and conference in 2022.

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