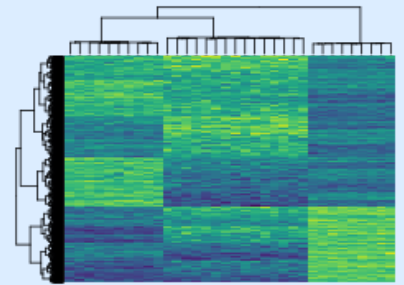# KASIA KEDZIERSKA

I am a 3rd year PhD student at the University of Oxford. I am a comuptational biologist, i.e. I use Data Science and Statistical Machine Learning while answering biological questions related to cancer of the uterus. Specifically, I study chromatin organisation in endometrial cancer. I spend most of my time either in command line writing Bash/Awk scripts or analysing and visualising data n R/Python.

I like teaching and deeply believe in Open Science. I am the President of #NGSchool Society with which I've been organising Summer Schoools in Bioinformatics. During last year edition - #NGSchool2019: Machine Learning for Biomedicine we recorded and published some of the lectures. This year, becasue of the pandemic we switched to organising virtual events, like NGSseminars series.

⬇ Download a PDF of this CV

RESEARCH EXPERIENCE

2022
|
2018

DPhil Candidate

Church group @ Wellcome Centre for Human Genetics, Wedge group @ Big Data Institute

📍 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*.

🎓 EDUCATION

2022
|
2018

DPhil. Candidate, Genomic Medicine and Statistics

Nuffield Department of Medicine, Brasenose College

📍 University of Oxford, UK

· Project: *Functional and evolutionary characterisation of chromatin organisation in endometrial cancer.*
· Wellcome Trust Studentship

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.
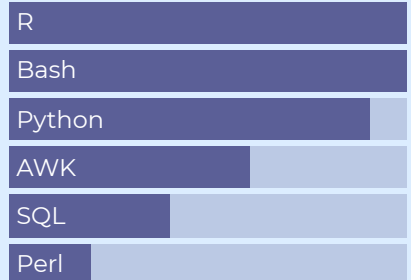
CONTACT

✉ kasia@well.ox.ac.uk

🐦 kzkedzierska

🐙 github.com/kzkedzierska

🔗 kasia.codes

in kzkedzierska

LANGUAGE SKILLS

R	
Bash	
Python	
AWK	
SQL	
Perl	

PUBLICATIONS

2019

Dynamics of cardiomyocyte transcriptome and chromatin landscape demarcates key events of heart development

Genome Research

· Regulation networks in heart developmnent in zebrafish.

2018

Genomic analysis of DNA repair genes and androgen signaling in prostate cancer

BMC Cancer

· DNA repair genes and androgen signalling in prostate cancer cell lines.

2018

SONiCS: PCR stutter noise correction in genome-scale microsatellites

Bioinformatics

· Tool for genotyping short tandem repeats (STRs) profiled using capture assays, github.com/kzkedzierska/sonics

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

AWARDS AND HONOURS

2019 | 2018

Best Master Thesis in Bioinformatics

· The Best Master Thesis defended in the field of Bioinformatics in 2018 in Poland.

· *Analysis of the mutational burden across gene sets in cancer* Masther thesis defended at the Warsaw University of Technology; code for the analyses can be accessed github.com/kzkedzierska/cancers

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

🎓 ATTENDED WORKSHOPS, SUMMER SCHOOLS

2019

Machine Learning Summer School
Imperial College London, University College Londn

📍 London, United Kingdom

· 12-day intensive course on a variety of topics in machine learning.

€ 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.

🤝 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