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.

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

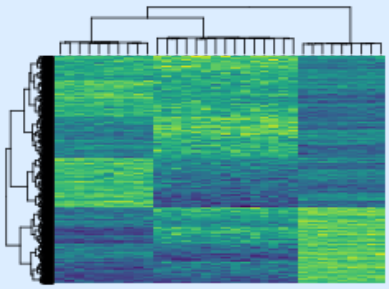
2018 | 2015

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.



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CONTACT

- kasia@well.ox.ac.uk
- kzkedzierska
- github.com/kzkedzierska
- kasia.codes
- kzkedzierska

LANGUAGE SKILLS

- R
- Bash
- Python
- AWK
- SQL
- Perl

*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 2020-11-09.

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

- 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

- I led a 2-hour introduction to working with Git. The session aims at highlighting the advantages of working with Git as well as providing participants knowledge how to use Git.

2019

Unsupervised learning, Introduction to Python

#NGSchool2019: Machine Learning for Biomedicine

- 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

- 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

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