

# CV

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## Kornel Labun

### Contact

Contact me using email  
on the website to get my  
address or phone



### EDUCATION

- 2015 - 2019      PhD candidate: University of Bergen, Department of Informatics, Computational Biology Unit
- 2013 - 2014      MSc: Silesian University of Technology, Faculty of Automatic Control, Electronics and Computer Science; Biotechnology, spec. Bioinformatics
- 2009 - 2013      Eng: Silesian University of Technology, Faculty of Automatic Control, Electronics and Computer Science; Biotechnology, spec. Bioinformatics
- Awarded (2nd place) in Best Students' Scientific Circle of Bioinformatics Projects in 2011/2012 Competition.
- 2006 - 2009      II High school name of general Władysław Anders: advanced biology, chemistry and physics class

### RESEARCH EXPERIENCE

- 2015-2019      *PhD research on the topic related to CRISPR/Cas systems. Title of dissertation in preparation.* (supervisor: Eivind Valen)
- Analysis of RNA-Seq, Ribo-Seq, Cage-Seq and other \*-Seq kind of datasets as well as nanopore sequencing data
  - Development of pipelines and tools ([ORFik](#), [ampliCan](#), [RareVariantVis](#), [CHOPCHOP](#))

- Teaching for courses: INF207 (Social Network Theory), INF109 (Computer Programming for Science), and [R Crash Course](#) for Molecular and Computational Biology Research School
- 2013 -2014      *Spatial evolutionary games as a tool for modeling inter-population interactions.* MSc dissertation (supervisor: Prof. Andrzej Świerniak)
- formed the basis of more structured modeling of simulations with use of spatial evolutionary games
- 2012 -2013      *Seeking for the signature of radiosensitivity with the use of data on single nucleotide polymorphisms and the results of  $\gamma$ -H2AX test with the expressions of the chosen DNA repair genes.* Eng project (supervisor: Prof. Joanna Polańska)
- 2011 - 2012      *Detection of novel microRNA in deep sequencing data from thyroid cancer.* (Advisor: Tomasz Stokowy, PhD student at Silesian University of Technology).
- Awarded (2nd place) in Best Students' Scientific Circle of Bioinformatics Projects in 2011/2012 Competition.

## PUBLICATIONS

*CHOPCHOP v3: expanding the CRISPR web toolbox beyond genome editing*  
[K Labun](#), TG Montague, M Krause, Y Torres Cleuren, H Tjeldnes, E Valen  
 2019, submitted manuscript

*Accurate analysis of genuine CRISPR editing events with ampliCan*  
[K Labun](#), X Guo, A Chavez, G Church, JA Gagnon, E Valen  
 2019, BioRxiv, 249474 (accepted for publication by Genome Research)

*CHOPCHOP v2: a web tool for the next generation of CRISPR genome engineering*  
[K Labun](#), TG Montague, JA Gagnon, SB Thyme, E Valen  
 2016, Nucleic acids research 44 (W1), W272-W276

*RareVariantVis: new tool for visualization of causative variants in rare monogenic disorders using whole genome sequencing data*  
 T Stokowy, M Garbulowski, T Fiskerstrand, R Holdhus, [K Labun](#), ...  
 2016, Bioinformatics 32 (19), 3018-3020

## WORK EXPERIENCE

Since April 2015	PhD candidate at the University of Bergen in the ValenLab.
July 2014 - April 2015	Software engineer/data analyst at "rspective" - front-end and back-end website development, machine learning solutions and data analysis, quality assessment, architectural design and deployment.

### Projects:

- Data analysis and preparing machine learning solutions to optimize logic behind german startup.
- Developing and maintaining web application about passenger relationship management system for public transport - responsible for frontend and backend. Application created with range of javascript oriented technologies: MongoDB, Heroku, Node.js, AngularJS, jQuery, Twilio, Nexmo, MailChimp, Mandrill, Dropbox, Express, Grunt, Bower.
- Developing Android Application concerning gambling with push messaging and also SOAP services. Additionally created widget for fast checking results and quick access to application. Used technologies: Android SDK, Java, Android Studio.
- Developing and maintaining web application for football scouts - incorporating multi-tenant architecture, with flexibility for specific tenant needs. Used technologies: Java, Spring, Hibernate, AngularJS.
- Creating more extended version of microblog with technologies: Node.js, AngularJS, MongoDB, Bootstrap.

August 2011	Internship at Maria Sklodowska-Curie Memorial Cancer Center and Institute of Oncology Gliwice Branch, Department of Nuclear Medicine and Endocrine Oncology
July - August 2009	Labourer at Production Plant of Building Materials Kazimierz Ginter: palletizing sett

## ADDITIONAL INFORMATION

Skills	<b>Programming languages:</b> R + Bioconductor, python, JavaScript, Java (Android), Matlab + Simulink, LabView <b>Frameworks:</b> Node.js, AngularJS, Express, keras, tensorflow <b>PaaS &amp; SaaS:</b> Heroku, Openshift, Twilio, Nexmo, MailChimp, Mandrill, Dropbox
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**Version control systems:** Git

**Other:** Statistics, Parallel computing with computational clusters, linux

Languages      Polish (native), English (fluent), Russian (basic)

Memberships      World Chess Federation  
Bergen Judo Club

## INTEREST AND ACTIVITIES

chess

books

judo

painting

manga

## SCIENTIFIC INTERESTS

biostatistics

bioinformatics

design patterns

blockchain

machine learning

## REFEREES

Contact me on the web page for my referee details.

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