

# David Novák

## Curriculum vitae

- Prague, Czech Republic
- ☎ 00420 772 721 099
- ✉ davidnovakcz@hotmail.com
- WEB [davnovak.cz](http://davnovak.cz)
- in [linkedin.com/in/david-novák-04b65989](https://www.linkedin.com/in/david-novák-04b65989)



## LANGUAGE PROFICIENCY

English (fluent)  
Czech (fluent)  
German (B2)

## IT SKILLS

### Languages & frameworks

R with C++ (via Rcpp) and R Shiny.  
OOP, predominantly in C#/.NET, unit testing & CI/CD pipelines in GitLab.  
JavaScript, React, HTML & CSS.  
Version control under Git.  
Using Docker for reproducible pipelines.  
Casual use of Python, Java, Bash.

### Areas

Machine learning and statistics (R, C++).  
Algorithms: linear algebra, algebraic topology (C++).  
Front-end (JS React, R Shiny).  
Basic applications of AI (Java).

## CERTIFICATES

PADI Advanced Open Water Diver  
Czech driving license (AM, B1, B)

## VOLUNTEERING

**2014 – 2015.** *Lékořice, z. s.* Patient visits at the Thomayer hospital. Prague, Czechia.

## EDUCATION

**2018 – present.** Bioinformatics (Mgr. ~ MSc.). *Charles University*. Prague, Czechia.

**2015 – 2018.** Biology (Bc. ~ Bsc.). *Charles University*. Prague, Czechia.

**2008 – 2015.** International Baccalaureate (IB) Diploma Programme. *Nový PORG*. Prague, Czechia.

**2013.** AFS International exchange. *NMS BG BRG Klusemanstraße*. Graz, Austria.

## WORK EXPERIENCE

### 2018 – present

Research & coding

*Childhood Leukaemia Investigation Prague (CLIP), 2<sup>nd</sup> Faculty of Medicine, Charles University*

In silico trajectory inferences and clustering algorithms, their application in immunology, understanding haematopoiesis and malignancies therein. I am interested in single-cell data and using machine learning to get the most out of them. Contact person: doc. MUDr. Tomáš Kalina, Ph.D. ([tomas.kalina@lfmotol.cuni.cz](mailto:tomas.kalina@lfmotol.cuni.cz)).

### 2019

Teaching programming in R and algorithmisation

*Department of Paediatric Haematology and Oncology, 2<sup>nd</sup> Faculty of Medicine, Charles University and Motol University Hospital*

I taught two lessons of R programming and algorithmisation to attendees of Jan Stuchlý's course at the 2<sup>nd</sup> Faculty of Medicine. Materials are available (in Czech) at [davnovak.cz/clip/seminar\\_R](http://davnovak.cz/clip/seminar_R).  
Contact person: Mgr. Jan Stuchlý, Ph.D ([jan.stuchly@lfmotol.cuni.cz](mailto:jan.stuchly@lfmotol.cuni.cz)).

**2015 – present**

Subsidy consulting

*MIDA Consulting s. r. o.*

Research into subsidy opportunities (EU & Czech funds). Handling documentation, incl. translation & text review. Currently, this is an occasional activity of mine. Contact person: Mgr. Michala Pešková ([peskova@midaconsulting.cz](mailto:peskova@midaconsulting.cz)).

**2018**

Teaching English

*Channel Crossings, s. r. o.*

Individual English lessons (CAE prep course) and innovative approaches to language acquisition (English discussion club). Contact person: Vít Vořechovský ([vit.vorechovsky@chc.cz](mailto:vit.vorechovsky@chc.cz)).

**2017 – 2018**

Teaching algorithmisation

*Play4Future, s. r. o.*

Taught basics of algorithmisation to elementary school students at the Czech branch of Logiscool. Contact person: Marta Vichrová ([marta.vichrova@logiscool.com](mailto:marta.vichrova@logiscool.com)).

**2015**

Research assistance

*Institute of Physiology, Czech Academy of Sciences*

Cellular neurophysiology. DNA primer design, *E. coli* cultivation & transfection, immunohistochemistry & fluorescence microscopy. Contact person: Mgr. Martin Horák, Ph.D. ([mhorak@biomed.cas.cz](mailto:mhorak@biomed.cas.cz)).