

VLADIMIR NIKOLIĆ

📍 Vancouver, Canada ✉ vladlich@protonmail.com 🌐 github.com/schutzekatze

SKILLS

BIOINFORMATICS

Genome Assembly★
Variant Calling
Illumina, Linked Reads

SYSTEMS & EMBEDDED

Linux★, Bash★
Arduino, Raspberry Pi, STM32
Computer Architecture
Basic Electronics

DATA SCIENCE

Deep Learning, Tensorflow
Computer Vision, OpenCV
Python★, R
SQL, PostgreSQL

HIGH PERFORMANCE

C★, C++★, Rust
SLURM
Large Datasets

WEB & MOBILE

Django, Flask
HTML, CSS, JavaScript
Bootstrap, jQuery
Java, Android

LANGUAGES

Serbian (*Native speaker*)
English (*Fluent*,
IELTS 8 / CEFR C1)
German (*Basic*)

★ Proficient

EDUCATION

M.Sc. in Bioinformatics

University of British Columbia (ubc.ca)

Grade Avg: 88.3%, Thesis:

"Scalable methods for improving genome assemblies"

NSERC-CREATE scholarship awardee

Vancouver, Canada

Winter 2018 – Spring 2021

B.Sc. in Software Engineering

University of Belgrade (etf.bg.ac.rs)

CGPA: 9.54/10.00, Thesis:

"Cloudiness Estimation using Convolutional Neural Networks"

Belgrade, Serbia

Autumn 2013 – Spring 2018

WORK & RESEARCH EXPERIENCE

Research Programmer

Canada's Michael Smith Genome Sciences Centre (bcgsc.ca)

Designing and implementing scalable Bioinformatics software, primarily
for genome assembly applications.

Vancouver, Canada

Spring 2021 – present

Intern

Institute of Physics Belgrade Innovation Centre (ic.ipb.ac.rs)

Devised and implemented a custom visual pattern comparison algorithm
for the Teslagram project.

Belgrade, Serbia

Spring 2018, Autumn 2018

Co-founder

Startup, Medici Project

Attempted and failed a startup due to team's diverging future plans. The
idea was to create a personalized assistant for every day financial tasks.

Belgrade, Serbia

Autumn 2017 – Spring 2018

PUBLICATIONS & CONFERENCE PROCEEDINGS

**ntJoin: Fast and lightweight assembly-guided scaffolding using minimizer
graphs**

Bioinformatics (academic.oup.com/...)

Coombe L, Nikolić V, Chu J, Birol I, Warren R

Spring 2020

Automation of a meteor video network

International Meteor Conference 2018 Proceedings (imo.net/...)

Nikolić V, Golubović S

Pezinok-Modra, Slovakia

Summer 2018

Cloudiness estimation for video meteor observations

International Meteor Conference 2017 Proceedings (imo.net/...)

Nikolić V, Schröder L, Tešić A

Petnica, Serbia

Autumn 2017

OTHER ACTIVITIES

Developer

Spring 2017 – present

Personal Project, Arch Setup (github.com/...)

A set of Bash scripts that automate the setup of various Arch Linux components to make it functional and user friendly.

Developer

Autumn 2017 – present

Personal Project, Meteor Notebook (play.google.com/...)

An Android application that aids visual meteor observations. Adjusted not to distract at night time and to help later data analysis.

Club member

Vancouver, Canada

UBC Orbit (ubcorbit.com)

Winter 2018 – Autumn 2019

Member of the UBC Orbit student club whose mission is to build and launch a cubesat capable of capturing images of Earth.

Participant

Ostrava, Czech Republic

PRACE Summer of HPC (summerofhpc.prace-ri.eu)

Summer 2018

Improved the performance of one of the genome assembling stages of the ABySS assembler (github.com/...) with the use of OpenMP and MPI.

Contributor

Autumn 2017 – Summer 2018

Open Source, Meteorflux (meteorflux.org)

An open source project by the International Meteor Organization for analysing meteor shower activity. I lead a team of volunteers from Petnica Meteor Group that fixes bugs and adds additional features.

Participant

Petnica, Serbia

Petnica Summer Institute Machine Learning 2017 (psiml.petnica.rs)

Autumn 2017 – Spring 2018

Made All Sky Cloudiness Estimator Project (github.com/...) software package that outlines night sky clouds in All Sky images for the purposes of video meteor observations.

Presented at International Meteor Conference 2017.

Awarded 3rd place on IEEEESTEC - 10th International Students Projects Conference.

Member of the local organizing committee

Petnica, Serbia

International Meteor Conference 2017 (imo.net/...)

Autumn 2017

Helped organize the conference, introduce attendees, and provide technical support.

Participant

Petnica, Serbia

Petnica Meteor Astronomy Summer School (meteori.rs)

Summer 2017

Learned about meteor astronomy and visual meteor observation.

Implemented a 3D physics simulation in C++ and its visualization in Python of ballistic aggregation.

Engineering Team Member

Belgrade, Serbia

University of Belgrade (etf.bg.ac.rs), *Mewps Project*

Autumn 2016 – Spring 2017

A robot platform that utilizes Raspberry Pi and Arduino. Capable of tracing and moving towards sound sources.

Originally a hobby project, later supervised by my microprocessor systems professor Saša Stojanović.

Participant

Belgrade, Serbia

EDIT Summer School 2016 (edit.world)

Summer 2016

Made an augmented reality Android app that is capable of rendering 3D models of preset textbook pictures as they appear on the camera.

Awarded as the best participant.

Student Demonstrator

Belgrade, Serbia

University of Belgrade (etf.bg.ac.rs)

Autumn 2014 – Autumn 2017

Overseeing laboratory practices and grading students' assignments.

Student Mentor

University of Belgrade (etf.bg.ac.rs)

Introducing and helping out freshmen with university's organization and classes.

Belgrade, Serbia

Autumn 2015 – Autumn 2016

INTERESTS & HOBBIES

Nature & Urban Exploring • Rock climbing • Parkour • Snowboarding • Soft Martial Arts • Meteor Observation