

## VLADIMIR NIKOLIĆ

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## SKILLS

## BIOINFORMATICS

Genome Assembly★  
Variant Calling  
Illumina, Linked Reads

## SYSTEMS &amp; 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 &amp; 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](http://ubc.ca))  
NSERC-CREATE scholarship awardee  
Expected graduation: Spring 2021

Vancouver, Canada  
Winter 2018 – present

**B.Sc. in Software Engineering**

University of Belgrade ([etf.bg.ac.rs](http://etf.bg.ac.rs))  
CGPA: 9.54/10.00, Thesis:  
"Cloudiness Estimation using Convolutional Neural Networks".

Belgrade, Serbia  
Autumn 2013 – Spring 2018

## WORK &amp; RESEARCH EXPERIENCE

**Intern**

Institute of Physics Belgrade Innovation Centre ([ic.ipb.ac.rs](http://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 &amp; CONFERENCE PROCEEDINGS

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

Bioinformatics ([academic.oup.com/...](http://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/...](http://imo.net/))  
Nikolić V, Golubović S

Pezinok-Modra, Slovakia  
Summer 2018

**Cloudiness estimation for video meteor observations**

International Meteor Conference 2017 Proceedings ([imo.net/...](http://imo.net/))  
Nikolić V, Schröder L, Tešić A

Petnica, Serbia  
Autumn 2017

## OTHER ACTIVITIES

**Developer**

Personal Project, Arch Setup ([github.com/...](http://github.com/))  
A set of Bash scripts that automate the setup of various Arch Linux  
components to make it functional and user friendly.

Spring 2017 – present

<b>Developer</b> <i>Personal Project, Meteor Notebook (<a href="https://play.google.com/...">play.google.com/...</a>)</i> An Android application that aids visual meteor observations. Adjusted not to distract at night time and to help later data analysis.	Autumn 2017 – present
<b>Club member</b> <i>UBC Orbit (<a href="http://ubcorbit.com">ubcorbit.com</a>)</i> Member of the UBC Orbit student club whose mission is to build and launch a cubesat capable of capturing images of Earth.	Vancouver, Canada Winter 2018 - Autumn 2019
<b>Participant</b> <i>PRACE Summer of HPC (<a href="https://summerofhpc.prace-ri.eu">summerofhpc.prace-ri.eu</a>)</i> Improved the performance of one of the genome assembling stages of the ABySS assembler ( <a href="https://github.com/...">github.com/...</a> ) with the use of OpenMP and MPI.	Ostrava, Czech Republic Summer 2018
<b>Contributor</b> <i>Open Source, Meteorflux (<a href="https://meteorflux.org">meteorflux.org</a>)</i> 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.	Autumn 2017 - Summer 2018
<b>Participant</b> <i>Petnica Summer Institute Machine Learning 2017 (<a href="https://psiml.petnica.rs">psiml.petnica.rs</a>)</i> Made All Sky Cloudiness Estimator Project ( <a href="https://github.com/...">github.com/...</a> ) 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.	Petnica, Serbia Autumn 2017 - Spring 2018
<b>Member of the local organizing committee</b> <i>International Meteor Conference 2017 (<a href="https://imo.net/...">imo.net/...</a>)</i> Helped organize the conference, introduce attendees, and provide technical support.	Petnica, Serbia Autumn 2017
<b>Participant</b> <i>Petnica Meteor Astronomy Summer School (<a href="https://meteori.rs">meteori.rs</a>)</i> Learned about meteor astronomy and visual meteor observation. Implemented a 3D physics simulation in C++ and its visualization in Python of ballistic aggregation.	Petnica, Serbia Summer 2017
<b>Engineering Team Member</b> <i>University of Belgrade (<a href="https://etf.bg.ac.rs">etf.bg.ac.rs</a>), Mewps Project</i> 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.	Belgrade, Serbia Autumn 2016 - Spring 2017
<b>Participant</b> <i>EDIT Summer School 2016 (<a href="https://edit.world">edit.world</a>)</i> 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.	Belgrade, Serbia Summer 2016
<b>Student Demonstrator</b> <i>University of Belgrade (<a href="https://etf.bg.ac.rs">etf.bg.ac.rs</a>)</i> Overseeing laboratory practices and grading students' assignments.	Belgrade, Serbia Autumn 2014 - Autumn 2017
<b>Student Mentor</b> <i>University of Belgrade (<a href="https://etf.bg.ac.rs">etf.bg.ac.rs</a>)</i> Introducing and helping out freshmen with university's organization and classes.	Belgrade, Serbia Autumn 2015 - Autumn 2016

## INTERESTS & HOBBIES

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