

MURATHAN GOKTAS

+1(236) 591-0642 ◇ Vancouver, BC

murathangoktas@gmail.com ◇ [linkedin.com/murathangoktas](https://www.linkedin.com/in/murathangoktas) ◇ github.com/MurathanGoktas/

SKILLS

Strengths	High-performance computing, Parallel computing, Object-oriented programming, High-dimensional biology analysis, Reinforcement learning, Data analysis
Programming Languages	C++, Python, R, Javascript, Typescript, Java, Rust, Shell
Frameworks and Libraries	OpenMP, POSIX threads, C++ threads, CUDA, Git, Pandas, Numpy, OpenCV, PyTorch, R Shiny, Django, React, NodeJS, Flutter, Docker, Snakemake

EDUCATION

Master of Science , Bioinformatics, University of British Columbia	Jan 2021 - Feb 2023
Relevant Coursework: Intelligent systems (RL, Bayesian Networks), Genome analysis	
Thesis title: K-mer based data types and pipelines for genomic sequence mapping and analysis	
Bachelor of Science , Computer Science, Bilkent University	Aug 2016 - Aug 2020
Relevant Coursework: Advanced algorithms, Parallel computing, Machine learning, Database, Linear algebra	
Bachelor of Science , Computer Engineering Exchange Student, Sungkyunkwan University	Aug 2018 - Dec 2018

EXPERIENCE

Graduate Research Assistant (High-Performance Computing) BC Genome Science Centre	Jan 2021 - present <i>Vancouver, BC</i>
<ul style="list-style-type: none">Improved LINKS software 300% in run time performance and 500% in memory usage by improved thread utilization and optimal data structures using C++. Presented the work in multiple international conferences.Integrated continuous development pipelines for 6 projects with Azure pipelines, Travis and GitHub actions.Developed a new method for long read mapping with probabilistic data structure, multi-index Bloom filter. Presented the work in multiple international conferences.Developed a new method for ancestry inference from raw genomic sequence. Built a database with size of 150 GB from 2.4 TB of raw data and achieved 92.4% in inference accuracy.Refactored legacy code with modern C++ standards and generated unit tests to ensure reliability.Organized weekly meeting, moderated the presentations and solicited questions from the audience.	
Fullstack Software Engineer tadilatimkacpara.com	Aug 2020 - Jan 2021 <i>Ankara, Turkey</i>
<ul style="list-style-type: none">Launched and led the project using mainly Django REST in backend and React in frontend.Implemented two-factor authentication system via e-mail or SMS service.Integrated AWS CDN to improve image fetching latency by 300%.Interviewed 20+ candidates and hired 3 software engineers.	

PROJECTS

Enzless Developed a pipeline to discover novel enzymes with Hidden-Markov Model and discovered 2 promising novel enzymes in public databases.

Autoshop Developed a mobile app for image editing with Flutter. Integrated computer vision for automatic image cropping with OpenCV and neural network models for object removal and style transferring. It was awarded with Best User Experience in the Capstone Project Awards at Bilkent University. ([Watch it here](#))

Quadrillion Desktop computer game implemented in Java. ([Watch it here](#))

Swing!! Hyper-casual mobile game developed in Unity 3D, downloaded 4k+ and rated 4,9/5,0. ([See it here](#))