

# Anshil Gandhi

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## EDUCATION

**B.Sc. in Computing Science  
and Mathematics**

**University of Alberta**

**Sept 2017 - April 2021**

Relevant coursework: Compiler Design, Database Management, Operating Systems, Graph theory, GPU programming, Theory of computation, Computer organization and architecture, Algorithms and data structures, Reinforcement learning, Functional and logic programming, Multivariable calculus, Coding theory, Statistics.

## EMPLOYMENT

**Software Engineer**

**LLVM Foundation**

**Aug 2020 - Contd.**

*Part-time*

- ❖ Fixing bugs in the clang compiler.

**Team Lead**

**Canadian Organization of**

**June 2020 - Contd.**

*Part-time*

**Undergraduate Health Research**

- ❖ Leading a team to develop an Android application to collect data from patients.

**Software Developer**

**NexOptic Technology**

**April 2020 - Aug 2020**

*Full-time*

- ❖ Implemented a Tensorflow based Image Signal Processor.
- ❖ Maintained and developed features for ALIIS™ on the Android platform in Kotlin.
- ❖ Improved build system for ALIIS™ by using CMake.

**Software Developer**

**NexOptic Technology**

**June 2019 - Aug 2019**

*Full-time*

- ❖ Developed an image streaming desktop application using dcraw, Spinnaker SDK, nuklear and OpenGL libraries.
- ❖ Optimized ALIIS™ to process 720p video and improve frame rate by 50%.
- ❖ Implemented image file converters for PNG, TIFF and DNG.

**Student Intern**

**University of Alberta**

**July 2016 - Aug 2016**

*Full-time*

- ❖ Refactored a Java reinforcement learning interface.
- ❖ Implemented reinforcement learning environments, including mountain car and the game of 2048.

## OPEN SOURCE PROJECTS

**betterIR** implements out-of-tree LLVM IR passes.

**Aug 2020 - contd.**

**ammoc** is an LLVM-based compiler frontend for a Rust-like programming language, written in C++.

**June 2020 - Aug 2020**

**unixFS** is a UNIX-based file system, written in C++.

**Nov 2019 - Dec 2019**

**mapReduce** is a thread pool library for computing word count, written in C++.

**Oct 2019 - Nov 2019**

**Lianshell** is a UNIX-based shell program, written in C++.

**Sept 2019 - Oct 2019**

**EulerTikz** is an implementation of a force-based layout graph drawing algorithm, written in Python 3.

**Jan 2019**

## AWARDS

**Open Kattis** ranked 191 out of over 5000 problem solvers across the world

**HackerRank** 6-star gold badge in problem solving

**Communitech's Code to Win challenge** ranked among the top 75 coders across Canada

**RMRC 2019** ranked third place in the ACM's regional programming contest out of 75 teams in the Rocky Mountain region

**RMRC 2018** ranked 23<sup>rd</sup> place in the ACM's regional programming contest out of 65 teams in the Rocky Mountain region

## SKILLS

**Proficient** C/C++; Kotlin; Python; Android development; UNIX; Git

**Competent** Rust; Java; Lisp; Prolog; Bash; Firebase