# **Anshil Gandhi**

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## **EDUCATION**

Edmonton, AB University of Alberta Sept 2017 - April 2021

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

<u>Relevant coursework:</u> 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.

#### **Extracurricular activities**

- Veteran of the problem solving and programming club
- ❖ Software team member in AlbertaSat

## **E**MPLOYMENT

Software Engineer LLVM Foundation Aug 2020 - Contd.

Part-time

Fixing bugs in the clang compiler.

**Team Lead** Canadian Organization of Undergraduate June 2020 - Contd.

Part-time Health Research

Leading a team to develop an Android application to collect patients' routine and present it in an organized manner for the researchers to analyze.

Software Developer NexOptic Technology April 2020 - Aug 2020

Full-time

- ❖ Implemented a Tensorflow based ISP.
- **❖** Maintained and developed features for ALIIS<sup>™</sup> on the Android platform in Kotlin.
- **❖** Improved build system for ALIIS<sup>™</sup> by implementing 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<sup>™</sup> to process 720p video and improve frame rate by 50%.
- ❖ Implemented image file converters for PNG, TIFF and DNG.

Full-time

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

## **PROJECTS**

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

**Lianshell** is a UNIX-based shell program supporting process management and interprocess communication.

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

**unixFS** UNIX-based file system implementation, written in C++11, which supports features including disk mounting, file/directory creation and deletion, file I/O operations, file resize and disk defragmentation.

**mapReduce** library is a multithreaded application for computing word count, written in C++. **RubberDuck** is a personalized competitive programming training application for the Android platform using the codeforces API.

## **A**WARDS

Open Kattis ranked 191 out of 5000 across the world

HackerRank 6-star gold badge in Algorithms and data structures

Bronze medal in RMRC 2019 ranked third place in the ACM's Rocky Mountain Regional Contest out of 75 teams

## **PROGRAMMING LANGUAGES**

**Proficient** C/C++; Kotlin; Python

Competent Rust; Java; Lisp; Prolog; Bash