

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

Open Source Contributor

LLVM Compiler Infrastructure

December 2020 - Contd.

Part-time

- ❖ Testing the baseline hot-cold splitting pass by running firefox benchmarks.

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

Student intern

- ❖ Implemented a Tensorflow based Image Signal Processor, which is an image pipeline of algorithms including bayer transformations and demosaicing, written in Python 3.
- ❖ Maintained and developed features for ALIIS™ on the Android platform in Kotlin.
- ❖ Developed a CMake build system for ALIIS™.

Software Developer

NexOptic Technology

June 2019 - Aug 2019

Student intern

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

Student Intern

University of Alberta

July 2016 - Aug 2016

Full-time

- ❖ Implemented reinforcement learning environments for the game of 2048 and mountain car in Python 3.

PERSONAL PROJECTS

gazc is an LLVM-based compiler frontend for the Gazprea programming language, written in C++.

betterIR implements out-of-tree LLVM IR passes, written in C++.

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

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

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

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

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

AWARDS

Open Kattis ranked 206 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 23rd place in the ACM's regional programming contest out of 65 teams in the Rocky Mountain region

TECHNICAL SKILLS

Programming Languages C/C++; Kotlin; Rust; Python; MIPS; X86; ARMv7; Lisp; Swift

Tools and frameworks Android; UNIX; Git; Firebase; SQL; MongoDB; CUDA