# Anshil Gandhi

gandhi21299@gmail.com | (780) 700-4726 | https://gandhi56.github.io |
https://www.linkedin.com/in/anshil-gandhi-9a7a8819a/

## Education

**Edmonton, AB** **University of Alberta** **Fall 2017 - 2021.**
**B.Sc. in Computing Science and Mathematics**
**Relevant coursework** 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**
- Regular attendant of the problem solving and programming club
- Software team member in AlbertaSat

## Employment

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

- Led a team to develop Alztracker, an Android application used to collect patients' routine and present it in an organized manner for the researchers to analyze.

**Software Developer** **NexOptic Technology** **April 2020 - Contd.**
**June 2019 - August 2019**

- Developed a GUI to process images with dcraw and reduce impulse noise with ALLIS™ on the Jetson Nano microcontroller with the help of POSIX threads, Spinnaker SDK, nuklear and openGL libraries.
- Customized GUI to handle real time video processing with ALLIS™, added a slider for comparing ALLIS's noise reduction performance.
- Optimized ALLIS™ to process 720p video and improve frame rate by 50%.
- Implemented image file converters for PNG, TIFF and DNG.
- Refactored the dcraw C program to perform static linking with ALLIS™.
- Implemented a Tensorflow based ISP.

**Student Intern** **University of Alberta** **July 2016 - August 2016**

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

## Projects

**RubberDuck** is a competitive programming trainer android app built with API support from codeforces, intended to track user performance statistics and suggests users training sessions to improve their algorithm design skills.
**EulerTikz** implementation of force-based layout graph drawing algorithms, 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++ using POSIX threads.

## Additional Experience and Awards

**Open Kattis** ranked 184 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.

## Skills and technologies

**Programming languages** C++/C; Kotlin; Python; Java; MIPS; JavaScript; Lisp; C#; VB.NET; Bash; Rust.
**Hardware** Jetson Nano; Arduino; Raspberry Pi 2.
**Environments** Android Studio; Visual Studio; Unity