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ANSHIL GANDHI

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EMPLOYMENT

Software Developer **NexOptic Technology** **Summer 2019**

ALLIS

- Developed a parallel GUI using the Spinnaker SDK, nuklear and openGL libraries integrating ALLIS to perform image processing and noise reduction from a Point Grey camera on NVIDIA's Jetson Nano microcontroller.
- 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 at 15 FPS by reducing overhead.
- Implemented image file converters for PNG, TIFF and DNG.
- Refactored the dcraw C program to perform static linking with ALLIS.
- Experienced developing software in C++ in a UNIX environment over CPU and GPU, along with 4 other developers.

Student Intern **University of Alberta** **Summer 2016**

Reinforcement learning interface

- Implemented environments for testing RL agents in Python and Java.

EDUCATION

Edmonton, AB **University of Alberta** **Fall 2017 - contd.**

B.Sc. in Computing Science and Mathematics | Year 3

- **Undergraduate Coursework** Operating Systems; GPU programming; Theory of computation; Computer Organization and Architecture; Data Structures; Algorithms; Reinforcement learning; Functional and logic programming; Multivariable Calculus; Graph theory; Coding theory; Ring theory; Group theory; Representation theory; Statistics.
- **Extracurricular Activities**
    - Problem solving and programming club

TECHNICAL EXPERIENCE

Projects

- **unixFS** UNIX-based file system implementation, written in C++, which supports features including disk mounting, file/directory creation and deletion, file I/O operations,file resize and disk defragmentation.
- **mapReduce library** a programming model and a distributed computing paradigm for large-scale data processing, written in C++.
- **lianshell** a standalone procedurally designed UNIX-based shell program, written in C++, which supports process management and interprocess communication via piping and signal transmission.
- **Q3T** an implementation of the game of Quantum Tic-Tac-Toe, written in Python 3.

AWARDS

- **Open Kattis Coding platform** Ranked 182 across the world, solved 365 problems.
- **HackerRank Coding platform** earned a 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, sponsored by JetBrains and twoSigma.

Languages and Technologies

- **Programming Languages** C++11/14/17; C; Python; JavaScript; Java; Lisp; C#.NET; Bash; Kotlin; Rust.
- **Editors and IDEs** VIM; Visual Studio Code; Visual Studio; Android Studio.
- **Knowledge of compiler framework** LLVM Clang.
- **C++ libraries** openGL; openCV; CUDA