

HEIDI FEHR

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Education

University of Nevada, Las Vegas

May 2023

Major: Bachelor of Science, Computer Science, GPA 3.75

Awards

Dean's Honor List

2018 - 2021

Valedictorian Scholarship

2018 – 2021

Relevant Coursework

CS 370 – Operating System

- Attaining skills and understanding of operating systems organization and sharing allocation of system resources Present
- Evaluating protection mechanisms and integration of system components

CS 202 & CS 302 – Data Structures

Spring 2021

- Designed programs involving sequential, indexed sequential and other file organizations
- Applied internal structures including stacks, queues, trees, and graphs

CS 477 – Design and Analysis of Algorithms

Fall 2021

- Performed in-depth analysis time and space complexities of various algorithms
- Developed knowledge for efficient algorithms and data structure designs

PHIL 242 – Ethics for Engineers and Scientists

Spring 2020

- Analyzed ethical issues that commonly arise in engineering and science practice
- Researched case-studies to recognize and articulate ethical problems

Languages & Technology

C++ • C • Python • Linux • Assembly Languages (x86, MIPS) • Bash Scripting • Data Structures • Threading • Quartus

Projects

Graph and Path Solver

- Built a program to find all the possible paths from a starting street to a destination given a map containing the direction of a set of streets
- Using C++; hash-map; by myself and help of Tas; took about 2 weeks on an off
- Result: gives the correct number of paths each time, used various text documents to test (and works each time)

Sudoku Solver

- Developed a program to find the solution to a given sudoku problem
- Using C++; recursive back-tracing algorithm; took about 16 hours to code
- Result: Successfully solves any given sudoku puzzles

Research Experience

International Undergraduate Research

Big Data, Energy & Related Infrastructure

June 2021 – July 2021

Research Trainee

- Designed a machine learning pipeline to do real-time predictive assessment on maintenance on plant equipment
- Collaborated with students from Universiti Teknologi PETRONAS and other colleges over 6 weeks
 - Used Python to assess time series data using algorithms like: Linear Regression, KNN, Decision Tree, ARIMA, etc.
- Result: ARIMA predicted the pipeline degradation with 43.75% success rate