Kanishka Roy
Software Engineering Intern and Bachelor of Science Student

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Education

University of Calgary - Computer Science & Applied Mathematics   2019-ongoing

Skills

Computer Science:

- Python - Problem solving and implementation of small-scale systems involving
- I/O, expressions, conditionals, & functions alongside implementing data structures
- Java - Implementation and analysis of OOP, GUI development (JavaFX, JFrame, Swing), & creation of unit tests (JUnit)
- Assembly - A64 assembly development involving program implementations with and without macros, register declarations, variable storing, stack space creations, & subroutines
- SQL - Managing and implementing information in a relational database, schema design
- XML & XQuery - Representing information in a structured format and transforming sets of data into XML
- C#, ASP.NET, Angular, Node.js, React - Utilized in web development, in order to implement front end and back end methods.
- Data Structures & Algorithms - Analyzing and implementing arrays, lists, stacks, queues, trees, hash tables, & graphs

Applied Mathematics:

- Linear Methods - Matrix algebra, vectors in Euclidean spaces, transformations, determinants,
- complex numbers, eigenvalues, & applications
- Discrete Mathematics - Proof techniques & analysis of sets, relations, & functions as well as induction & modular arithmetic
- Calculus
- Statistics
- Analysis - Functions, countable, & uncountable sets. The axioms and topology of real numbers, alongside convergence, limits, and continuity

Professional Experience

Xplore Hub Inc. - Computer Programming Tutor   2022-2023

- Tutored age ranges from 10-17 years old in Scratch, Lua, & Python
  - Scratch - Focused on the basics of drag and drop programming
  - Lua - Connected Lua programming with Roblox to design projects in game and built scripts
  - Python - Focused on variable conventions and calling upon them, if-statements, loops, operations, and basic game design
- Held weekly tutoring sessions to ensure steady progress
- Communicated with other tutors/managers to review students' activities and growth

- Tutored students in grades 7-9 in Science
  - Subjects include Simple Machines, Basics of Chemistry and Matter, Biology, & Solar System
- Held tutoring sessions twice a week to ensure growth and parallel work compared to classes
- Created shared documents to collaborate on note taking and homework assistance
- Held review sessions prior to in class quizzes/tests

Project Experience

Bank Account | Java
- Developed a text based bank account program with the usage of OOP
- Utilized user-inputs in order to return statements/values
- Converted text based program into GUI using JavaFx
- Monitored github alongside collaborator

Self-Checkout System | Java
- Collaborated with ten other team members in order to develop a full functioning GUI of Self Checkout System
- In charge of utilizing pre built methods/concepts for scanning and checking out of items
- Managed Github commits and overlooked collaboration efforts
- Created UML Diagrams to aid with class structures

UDeal | C#, ASP.Net, SQLite
- Collaborated with two other team members to create an online marketplace
- Utilized visual studio code, C#, & ASP.Net framework to establish classes and methods
- Created ER diagrams and Relational schemas in order to showcase with program structure
- Experimented with classes in order to modify and test layout of marketplace
- Managed Github repository with collaborators