

SYED WAQAR AHMED

Bachelor of Computer Science Student (BCS) - Immigration Status: Canadian Permanent Resident

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PROGRAMMING LANGUAGES AND TOOLS

* *Actively learning*

- **Languages:** JavaScript, TypeScript, Java, C, HTML, CSS, x86 Assembly, C++, C#, Python*
- **Frameworks:** Node.js, Mongoose, Express, Mocha, Selenium, TestNG, REACT with Redux*
- **Tools:** IntelliJ IDEA, VSCode, MySQL Workbench, Postman, NPM, Studio 3T, Android Studio*, GitHub, Bootstrap, Jira, Confluence, Redmine, Zephyr Scale, JMeter, MongoDB Atlas, AWS Cloud.
- **Database:** SQL, MySQL Workbench, MongoDB, MongoDB Atlas, Studio 3T

TECHNICAL PROJECTS

Outdoorly – Node.js, JavaScript, MongoDB, Express, REACT with Redux, MongoDB Atlas, AWS S3, OAuth, JWT Ongoing*

- Developed a full stack web application using MERN stack with RESTful API allowing users to search for, rate and review national parks according to their interests.
- Available here: <https://outdoorly.onrender.com/> (backend server takes 15 seconds to spin-up after first ping)

Course Querying software – TypeScript, Node.js, Express, JavaScript, HTML, CSS, TDD April 2023

- Developed a web application that allows students to query historical UBC course and building data. Source data include raw data published by UBC and data scraped from the UBC website.
- Used Agile methodologies (scrum), TDD, SOLID design principles and object-oriented design patterns.
- Used tree-walking algorithm to implement a custom EBNF query language. Built building database by using BFS to traverse DOM tree to scrape data from UBC website.
- Server-side development in TypeScript using Node and Express. Client-side in JS, HTML, CSS.
- TDD using Mocha and Chai test frameworks.

Inventory Management software – JavaScript, SQL, Node.js Aug 2022

- Developed a web app used to manage inventories at a warehouse.
- Created ER diagrams, normalized the database to 3NF and BCNF, designed the relations and schema and used MySQL Workbench to create and manage SQL database

Point-Of-Sale software for a Cafe – Java, OOP, JSON, JUnit Mar 2021

- Designed & developed a desktop app that can be used to order, record & manage menu and sales for a café.
- Used UML to create the project skeleton & applied OOP principles to design the modules and classes
- Designed the GUI using Java Swing and implemented data persistence to store/retrieve using JSON parsers
- Wrote extensive JUnit tests to ensure complete coverage during TDD

Lossy Image Compression problem – C++, Algorithms and Data Structures Dec 2021

- Implemented and optimized an algorithm for lossy image compression using a K-d tree.

Multithreaded Synchronization Problem – C, Mutex, Semaphore, X86 Assembly Mar 2022

- Used semaphores and mutexes to solve synchronization problems such as cigarette smokers' problem
- Implemented bubble sort in x86 Assembly. Optimized programs for X86 assembly-based pipelined processors

WORK EXPERIENCE

Technical Business Analyst – Digital Documents, Acturis-Canada, Victoria, BC May 2023 – Present

- Writing SQL scripts to design and configure insurance products available on the Acturis platform.
- Transforming data generated by Acturis software to generate pdf documents using XSLT (an XML-parsing language).
- Writing specifications for digital document products.
- Manual testing of digital document products.
- Resolving tickets for document builds/updates using JIRA, Redmine and FastTrack.

IB Diploma Instructor, TNS Beaconhouse, Lahore, Pakistan

Jan 2017 – Oct 2020

- Taught International Baccalaureate Diploma subjects of Biology and Environmental Systems and Societies. Mentored student participation in STEM national science competitions. Fostered student interest in Environmental Sciences increasing class enrollment from 3 to 50+ students over 4 years.

Research Assistant, LUMS - School of Science and Engineering, Lahore, Pakistan

Jan – Aug 2016

- Worked on a 6-month project investigating the role of microRNA roles in wheat genome evolution. Used computational biology tools to develop protocols, methodologies, and data pipelines for the analysis of high throughput genomic data.

EDUCATION

Bachelors in Computer Science (second-degree program) - *Average: 85.4%*
University of British Columbia, Canada.

*Expected April 2024

M.S. in Evolution, Ecology & Organismal Biology - *cGPA: 3.86/4.0*
University of California, USA.

Sep 2015

- *Awards: Fulbright Scholarship, Biology Graduate Student Award*