Chad Holst
chad.holst@hotmail.com
780-965-6205

Highlights of Qualifications

Programming/Data Analysis: Experience using C/C++, Python, and Java to complete coding assignments that required knowledge of data structures, algorithms, multithreading, and software design

Software Development: Familiar with software industry standards such as practicing SOLID principles, documentation, and software development methodologies/life cycle

Version Control: Managed remote and local repositories on 5 group coding projects using Git/GitHub

Web Development: Contributed to 3 web application projects that have involved HTML/CSS/JavaScript, MERN stack (MongoDB, Express, React, Node.js), Flask, MySQL, and MongoDB

Robotics/Automation: Implemented a GUI that communicates with a Raspberry Pi and PX4 autopilot to control electric motors on a drone; used MPLAB to program a PIC microcontroller

Computer Security: Analyzed vulnerabilities and controls of C++ programs in school; participated in a Capture The Flag (CTF) competition to learn about cybersecurity tools, trends, and technologies

General Computer Skills: Proficient with Windows/PowerShell, Linux/Bash, and the Microsoft suite

Learning: Committed to learning new technologies to improve existing skillset, recognized for academic excellence through earning a place on the Dean's List for the third academic year

Strong Work Ethic: Motivation that earned a fully paid apprenticeship with self-supervision privileges at a former company and acceptance into an engineering program through academic upgrading

Team Player: Collaborated effectively on diverse teams at work and school to accomplish common goals for over 10 years

Problem-Solving: Analyzes problems with a strategic approach which has resulted in solving many technical problems within a work and school environment

Attention to Detail: Considers each detail of a work task to perform at a high level until completion

Communication: Effective oral communicator who actively listens to participate in productive team meetings and welcomes constructive criticism; concise written communicator

Education

Bachelor of Science in Software Engineering   **Expected May 2024 (including internship)**
Schulich School of Engineering, University of Calgary
Cumulative GPA: **3.4**, Dean's List for the third academic year

Relevant Coursework
Computer Security, Computer Networks, Web-Based Systems, Software Project Management, Software Design, Database Management Systems, Data Structures and Algorithms, Software Development, Software Testing and Reliability, Software Requirements, Software Architecture, Programming Fundamentals, Operating Systems, Computer Organization, and Digital Circuits

Relevant Projects
Unmanned Underwater Vehicle   **September 2022 – April 2023**
Unmanned Vehicles Robotarium Lab, Calgary, AB
Python, MAVlink, TCP, and a custom electronic system for a drone

- Developed a surface-level GUI application in Python that controls an underwater drone and displays vehicle movement data such as acceleration

- Integrated electronics by creating communication software that enables a GUI to communicate with onboard electronics (i.e., Raspberry Pi, PX4 autopilot, Power Management Board)
- Built software capable of controlling actuators by sending PWM signals (i.e., servo motors, pneumatic grippers), sending multiple commands simultaneously, resetting vehicle state, and retrieving vehicle data
- Coordinated with a team of software and electrical engineering students to design and implement a software/hardware interface for drone communication using TCP socket programming

University Marketplace Web Application   **September 2022 – December 2022**
University of Calgary, Calgary, AB
MongoDB, Express, React, Node.js, and Socket.IO

- Collaborated with a team of software engineering/computer science students using Git/GitHub to develop a *fully responsive* university marketplace web application
- Implemented functionality such as sharing buy/sell posts, updating/deleting posts, search filters, banning users, and deleting user accounts
- Developed a real-time chat messaging system to communicate with other users using Socket.IO

Group Home Data Management Web Application   **September 2021 – December 2021**
University of Calgary, Calgary, AB
Python, Flask, HTML, CSS, JSON, and MySQL

- Led a team to develop a data management/sharing web application for professionals involved with a group home (i.e., therapists, doctors, youth workers)
- Created an API to exchange data formatted as JSON objects when communicating with the MySQL server
- Designed a database as a team of software engineering students using an Extended Entity-Relationship Model (EERD) and Relational Model (RM)

University Preparation Program   **January 2016 – December 2018**
MacEwan University
Cumulative GPA: **3.97**

Heavy Equipment Technician Apprenticeship Program   **October 2012 – December 2013**
Northern Alberta Institute of Technology

Additional Work Experience

D.G.C. Contracting Inc.   **February 2012 – January 2016**
Heavy Equipment Technician Apprentice
Spruce Grove, AB

- Performed repairs, fabrications, and maintenance on a variety of over 200 off-road and highway equipment units that were used for installing TELUS telecommunication systems
- Collaborated on a team that managed shop operations such as inventory, equipment inspections, and continuous profitable projects