



# Rang Xiao

Second degree in Computer Science, 3<sup>rd</sup> year  
 Bachelor of Science in Mechanical Engineering  
 Master of Engineering in Engineering Management

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## TECHNICAL SKILLS

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Language:	C, C++, Java, JavaScript, Python, PHP, HTML, CSS
Databases:	Oracle, SQL
Software:	VS Code, MATLAB, PyCharm, IntelliJ, WireShark
Mechanical Engineering:	CFD analysis; CAD drawing; Thermal-Fluid Design
Project Management:	Project Scheduling and Management; Risk Management; System Reliability Analysis

## Project

### CS Project

#### League of Legends Season Database

2022 Dec

- Designed a database to store and search season information about League of Legend Championship
- Developed a web-based user interface using PHP, HTML, and CSS
- Developed a database to keep and manage input data using Oracle and SQL
- Skills: HTML, CSS, PHP, Oracle, SQL

#### Student Information File System

2021 Dec

- Use Java built a information management system to store students' information, including basic information, course history and planning, average calculation.
- Store student information in a list and preserve input data in JSON file
- Load data from JSON file to restore data.
- Using Swing GUI generate student's course plan for current term
- Skills: JAVA, SWING GUI package

### Mechanical Engineering Project

#### Low-cost Adjustable Arm Prosthesis

2018 Apr

- Designed a low-cost adjustable arm prosthesis for simple grab and multi-conditional fitting
- Build a prototype by 3D printing
- Bending controlled hand is designed for light-weight lifting with lock mechanism
- Multi-conditional fitting designed for different injury condition ranging from palm lost to forearm lost
- Simple structure design for easy self maintenance
- Estimated massive production cost is under \$25

### Research Project

#### Simulation of Robot Seeding using robotic arm

2021 Dec

- 3D modeling the process of picking and sowing seed using robotic arm with trajectory planning
- Generate and manage the arm trajectory for picking seeds and sowing on relative location on growth medium
- Generate robotic arm control code
- Simulate the seed sowing process



## Work Experience

<b>School Counselor</b> , Maple Hill International Education	2019 Jan – 2020 Jan
<ul style="list-style-type: none"> <li>• Student information collection and management</li> <li>• Course planning base on student's condition and wish</li> <li>• Course schedule</li> </ul>	
<b>Sales Associate</b> , T&T Supermarket	2018 Jun – 2018 Oct
<ul style="list-style-type: none"> <li>• Raw fish process including cleaning, weighting, and cutting</li> <li>• Customer service</li> </ul>	
<b>Quality Control Engineer-intern</b> , Permco Hydraulic Inc., LTD	2017 Jun – 2017 Sep
<ul style="list-style-type: none"> <li>• Fault detection and analysis</li> <li>• Import raw material inspection</li> <li>• Product testing</li> </ul>	

## Academic History

<b>Bachelor of Science - Computer Science 3<sup>rd</sup> yr</b>	Expected graduation May 2025
University of British Columbia	
Area of study:	
<ul style="list-style-type: none"> <li>• Data Structures</li> <li>• Algorithms</li> <li>• Operating Systems</li> <li>• Computer Vision</li> <li>• Internet Computing</li> <li>• Data Mining and Machine Learning</li> </ul>	
<b>Master of Engineering – Engineering Management</b>	2020 Sep – 2021 Dec
University of Alberta	
Area of Study:	
<ul style="list-style-type: none"> <li>• Data analysis/Machine Learning/AI</li> <li>• Project schedule and management</li> <li>• Risk management</li> <li>• System reliability analysis</li> <li>• Financial condition analysis</li> </ul>	
<b>Bachelor of Science - Mechanical Engineering</b>	2014 Sep – 2018 Dec
University of Alberta	
Area of Study:	
<ul style="list-style-type: none"> <li>• Force Analysis in Complex System</li> <li>• Dynamics</li> <li>• Mechanical Drawing in SolidWorks</li> <li>• Mechanical Design</li> <li>• Thermal Dynamics</li> <li>• Fluid Dynamics</li> <li>• Computational Fluid Dynamics</li> <li>• Vibration</li> <li>• Thermal-Fluid Sys Design</li> </ul>	

## Volunteer Experience

<b>Kitchen Assistant</b> , South Granville Seniors Center	2014 Feb – 2014 Jul
<ul style="list-style-type: none"> <li>• Kitchen Assistant for meal preparation, dining room preparation, and serving</li> </ul>	
<b>Front Desk</b> , Canaan College	2014 Mar – 2014 Jul
<ul style="list-style-type: none"> <li>• Students' check-in and course material preparation</li> </ul>	