

Xiaohua Cai

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SKILLS

Languages & Frameworks

HTML/CSS/SASS, JavaScript, Python, Java, Node.js, Express, React, jQuery, Bootstrap, Visual Basic

Systems & Database: MongoDB, PostgreSQL, MySQL, Git/Github, Heroku, Netlify **Software Architecture:** RESTful API, MVC

EDUCATION

Front-End Web Developer NanoDegree from Udacity

December 2020- March 2021

Master of Science in Food Science & Bioresource technology

September 2017- December 2018

University of Alberta

GPA3.7/4.0

Bachelor of Science in Food Science and Engineering

September 2013- June 2017

Fujian Agriculture and Forestry University, China

core courses: GPA3.7/4.0

- Studied at University of Albert as a visiting student from 2016 to 2017

Award:

- Awarded by the Chinese State Scholarship (CSC) program to support students with exceptional academic achievements to study abroad for one academic year. (value: \$17,000 CAD). 2016-2017
- Awarded with third-class excellent academic scholarship. Honored with Outstanding Communist Youth League member. 2016
- Awarded with second-class excellent academic scholarship. Valued as merit student 2014-2015
- Awarded with China National Scholarship & first-class excellent academic scholarship. Received a second-prize of debate competition. Valued as merit student 2013-2014

Publication: <https://t-stor.teagasc.ie/handle/11019/2039>

WORK EXPERIENCE

Research and Development Scientist

January 2019- Present

SBI BioEnergy Inc.

- Calculated mass balance for 10+ lab-scale reactors through Microsoft Excel Visual Basic Programming
- Set up, connected and applied software applications to automatically control various chemical reaction process.
- Acquired data, tabulate and present data to the process and catalyst development team on regular basis
- Investigated and troubleshooted Hydrogen reaction processes.
- Develop new analytical methods as required to analyze and access properties of catalyst and biofuel product samples
- Conduct physical property assessment experiments of solid catalysts, liquid and gaseous biofuel product using various instruments, such as Gas Chromatography, UV Spectrophotometer, Fourier Transformed Infra-Red Spectrometer

Research Assistant

May 2018- November 2018

University of Alberta

- Synthesized and characterized canola oil amphiphilic block copolymers as nano drug carrier.
- Analyzed data using Microsoft Excel & plotted images using Adobe Illustrator software & graphed data using GraphPad Prism7
- Delivered professional presentations and submitted a fifty-page written scientific research paper

Research Assistant

January 2016- July 2016

Agriculture and Forestry University

- Conducted a scientific research. An author of a published scientific research paper. <https://t-stor.teagasc.ie/handle/11019/2039>
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CODING PROJECTS

Full Stack Chat App

April 2021

Use client-side and server-side WebSockets to create connections and broadcast messages

Front-end: React **Back-end:** Node.js, Express, Socket.io **Deployment:** Netlify, Heroku

[Live Page](#) [Repository](#)

Full Stack Library App

May 2021

An MVC pattern based application. Applied MongoDB, NoSQL. Used EJS view engine to render pages, it allows user to add, search, update information.

Front-end: CSS **Back-end:** Node.js, Express, MongoDB, Mongoose, EJS **Deployment:** Heroku

[Live Page](#) [Repository](#)

Loan Repayment Calculator Mobile App

July 2021

Technology: Java & Android Studio

[Repository](#)

Travel APP

A weather forecasting application. Data retrieved from three APIs: Pixabay API to display an image of the location entered, GeoNames API to retrieve coordinates, WeatherBit API to fetch weather data.

Front-end: HTML CSS **Back-end:** Node.js, Express

[Demo](#) [Repository](#)

User Management Systems

May 2021

Applied MongoDB to update and delete user information, used EJS view engine to render pages.

Front-end: CSS **Back-end:** Node.js, Express, MongoDB, Mongoose, EJS

[Repository](#)

Github Finder

April 2021

This application allows users search Github account profiles and Bios through retrieving data from the Github API.

Front-end: React functional components, Hooks & Context **Deployment:** Netlify

[Live Page](#) [Repository](#)

Full Stack Feedback App

May 2021

Front-end: HTML, CSS **Back-end:** Python Flask, PostgreSQL, maitrap.io

[Demo](#) [Repository](#)

Relevant Computer Course Completed	Relevancy	Grade
Fundamentals of Information Technology	Data Structure and Algorithm, Fundamental concepts in CS, Introduction to SQL, Database Systems, Intro to hardware systems and operation system	80/100
Experiment for Information Technology Foundation		98/100
Visual Basic Programming	Visual Basic	78/100

Relevant Online Course Completed	Relevancy	Grade
Managing Big Data with MySQL (through Coursera)	MySQL Relational Databases	pass
Front End Web Developer Nanodegree (Udacity)	HTML, CSS, JavaScript	pass
Front-End Web UI Frameworks and Tools: Bootstrap 4	HTML, CSS, JavaScript, Bootstrap 4	pass