

## EDUCATION

### Oregon State University

Corvallis, OR

B.S. in Computer Science

Expected in June 2023

Cumulative GPA: 3.67/4.00, Major GPA: 3.69/4.00

Concentration: **Artificial Intelligence**

- Academic Honors: Honor Roll (Summer 2020, Fall 2020, Winter 2021, Spring 2021, Summer 2021, Fall 2021, Winter 2022, Spring 2022)

## PROFESSIONAL SKILLS

- **Programming Language:** C/C++, Python, JavaScript, Node.js
- **Developer Tools:** VSCode, Visual Studio, Android Studio
- **Libraries:** Pandas, OpenCV, NumPy
- **Others:** Git, REST APIs, Flask, MacOS, Linux

## RESEARCH

### GIS Tool – Safer-Ways

Corvallis, OR

*Senior Design, Mentor: Louis, Joseph*

Nov. 2022-current

- Safer-Ways that enables users to calculate optimal routes between locations while avoiding hazardous obstacles.
- Our team created a suite of user-friendly interfaces that incorporate open-source routing software and geographic data, including intuitive toolbox extensions in ArcGIS Pro.
- I specifically contributed by using the Flask framework to develop the project's backend.
- With Safer-Ways, users can efficiently calculate routes that avoid wildfire perimeters, flood maps, degraded infrastructure, and other dangerous areas. Additionally, the platform allows for complex route aggregation operations to evaluate the efficiency of evacuation points.

### Development a Supply Chain Model

Corvallis, OR

*Mentor: Mohan, Karthika*

Oct.2022-current

- Implement a model making predictions for uncertain events by using probabilistic program.
- Building a supply chain model using the Python in order to answer causal queries.
- Collect relevant data and generate values of different parameters in the supply chain using different probability distributions, and then answer the causal queries through the model

## PROJECTS

## Traveling APP

Winter 2023

- Led a team of 4 people to create a travel app where users can enter the name of the city they want to visit and get information about that city.
- This app was developed in Android Studio using Kotlin programming language. The app includes multiple activities such as the main page, driving information, and restaurant information.
- The app obtains the user's departure location with their permission. The app primarily uses Google Maps API and Yelp API to gather relevant information.
- The app implements activity lifecycle methods, ViewModel architecture, and a user settings page that saves preferences with SharedPreferences.
- Mainly responsible for implementing all the functionality in the main page, using git and merging all the members' code into one complete program.

## Drawn Digit Identification (Small MNIST)

Fall 2022

- Implement a feed-forward neural network model for predicting the value of a drawn digit.
- Using Backpropagation for Feed-forward Neural Network.
- Use the ReLU as the active function and change some Hyperparameter values to improve the accuracy.
- The accuracy of this classifier is 95%.

## Sentiment Analysis based on Naive Bayes

Spring 2022

- Predicted the sentiment sentences taken from Yelp reviews to determine the writers' positive or negative attitudes toward the subject.
- Used Python to preprocess data by transforming each sentence into a feature vector plus a class label that could be readable by the Naive Bayes algorithm.
- Built a Naive Bayes classifier and trained the classifier so that it could read the training labels and learn the parameters used by the classifier.
- The accuracy of this classifier is 75%.

## Design of Student Management System

Spring 2021

- Implemented a complete RESTful API for Tarpaulin app, which allowed users to review course contents, set up, correct, and submit assignments.
- Managed backend data with MongoDB and verified the users' qualification based on JWT standard.

## TEACHING & VOLUNTEER EXPERIENCES

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### Teaching Assistant, Oregon State University

Jun.2022-Mar.2023

- Assisted the course instructor in grading and reviewing students' weekly assignments, quizzes, and course materials.
- Arranged FAQ sessions to tackle students' problems encountered in lectures and assignments.

### Community Volunteer

Jul.2021-Aug. 2021

- Provided community service to citizens in Xinxiang, a city that suffered from rainstorm, and arranged encouragement events.