

JINHE ZHANG

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EDUCATION

Jilin University

B.Eng. in Software Engineering; GPA: 91.22/100, Ranking: 3/367

Changchun, China

Sep. 2019 – June. 2023 (Expected)

Professional Experience

University of Guelph

Mitacs Globalink Research Intern, Mentor: Prof. Huiyan Li

Guelph, ON, Canada

Jul. 2022 – Oct. 2022

- **Developed a bioinformatic pipeline for in-silico discovery of potential cancer biomarkers.**
- **Workflow:** Proposed a new data selecting method to integrate previous efforts on OS studies. Proposed a new ensemble method to combine data from multiple databases. Analyzed the result and developed a dashboard to visualize the distribution of the statistics, provided a list of markers that can be further investigated experimentally.
- **Finished a paper on osteosarcoma detection. (submitted)**

FAW-Volkswagen Automobile Co., Ltd.

Software Engineer Intern

Changchun, China

Apr. 2022 – Jul. 2022

- Constructed essential pipelines using cloud service and machine-learning model to forecast output of products, managed the communication process between the terminal and the cloud to reduce unnecessary memory duplication, helped various sectors make informed decisions.
- Participated in the development of an infotainment software for Audi and a Mobile App in Android, realized C++ APIs to initialize, process, and release the TensorFlowLite model, and used Java Native Interface(JNI) to call these methods to facilitate subsequent model porting.
- Built a message-driven middleware system using Spring Cloud Stream, which generates usage records with the support of Kafka. Implemented time-limits eviction table for entry refreshment in Spring Boot and Redis, reducing DB load by 10%.

Jilin University

Research Assistant, Mentor: Prof. Fengfeng Zhou

Changchun, China

Apr. 2020 – Jun. 2021

- **Obtained programming experience in Python & R primarily regarding scikit-learn.**
- **Feature Selection Algorithm:** Designed a feature selection algorithm suitable for methylome biomarkers binary classification problem. Implemented the selection algorithm in a python package and performed methylation biomarker prediction, compared it with other machine learning models such as CNN, Bayes classifier, and SVM.
- **Estimation:** Estimated Immune cell fractions from Bulk RNA Sequencing data using Deconvolution Algorithm.

SELECTED PROJECTS

A Bot for Go Game (Game Theory & Heuristic Algorithm): Designed a bot program with extremely high win ratio in Go game using Monte Carlo tree search(MCTS).

Smart Snake (Search Algorithm): Designed a bot for snake game using alpha-beta pruning & memory-enhanced test driver.

Shopping Website: Designed and implemented a shopping website as a course project. Spring Tool, MySQL, Designed website User Interface by using CSS, Bootstrap, jQuery, AJAX, JavaScript with JSP.

Lab Softwares: Built pipelines and softwares for feature selection and biomarker detection.

Awards & Honors

- Mitacs Globalink Research Internship Award
- National Scholarship, Ministry of Education of China
- First Class Scholarship, Jilin University
- Outstanding Undergraduate, Academic Science and Technology Award, Jilin University
- Meritorious Winner, Mathematical Contest In Modeling, MAA

SKILLS

Languages: C++, C, Java, JavaScript, Python, R, Go, TypeScript, React.js, Node.js