Ziwei (Vicky) Zhao (she/her)   <Computer> Engineering Student

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TECHNICAL SKILLS

Languages
- Programming: C, Java, JavaScript, Python, HTML, CSS, MATLAB
- Spoken: English, Mandarin

Software Development
- Frameworks: React, Maven, Gradle, Spring MVC, Spring Boot, Android Studio
- Tools/Technologies: Git, Unix/Linux, MySQL, Redis, Flyway, Postman

AI & Machine Learning
- Machine Learning: Supervised, Unsupervised Learning, etc.
- Reinforcement Learning: Markov Decision Process, Bellman Equation, etc.
- Computer Graphics

EDUCATION

University of British Columbia   **Expected June, 2024**
Master of Engineering - < Computer > Engineering - CGPA 93.4%

University of Alberta   **September, 2018 – June, 2022**
Bachelor of Science - Specialization in Computing Science - CGPA 3.83/4.00

TECHNICAL WORK EXPERIENCE

Yanc, Inc., Toronto, ON   **May, 2022 – August, 2022**
Software Engineer Intern (unpaid)
- Used Spring Data and MySQL to build the backend database and fetched related data from the cache by Redis to improve the efficiency of the data transmission
- Participated and designed the core algorithm of the project services to reduce the algorithm complexity
- Tested the backend code by test/debug tools (like Postman and Junit) and wrote test cases based on project requirements and test points to test part of the code
- Mastered and proficiently used common frameworks (like Gradle and Spring Boot) and deployed various applications and dependences on Docker to help coding and improve work efficiency

iSpeak App, iDO Technologies, Inc., Remote   **October, 2021 – December, 2021**
Machine Learning Engineer Intern (paid)
- Produced recommender system using LightFM by continuously gathering and defining customer requirements to develop precise specifications for project plans
- Revised, modularized and updated code bases to modern development standards to reduce operational costs while improving functionality
- Designed intuitive graphical user interfaces using knowledge of serial communications and database design to improve user experience
- Consulted regularly with programming team on application development status, new project proposals and software-related technical issues to exchange opinions and help refine the project

NetEase, Youdao, Beijing, China   **August, 2021 – January, 2022**
Artificial Intelligence Intern (paid)
- Gained extensive knowledge regarding NetEase's internal editing platform powered by VGG Image Annotator (VIA) to design and compile image training datasets for training AI models
- Monitored and classified different types of annotation errors by reviewing each region, and attached image files into toggle attributes editor to obtain finalized training datasets for system editing
- Developed Python scripts to optimize training processes and drive continuous improvement on dataset annotation efficiency
- Marked and verified accuracy of procedures by formulating rules and descriptive documents for data processing to contribute to editing the data processing protocol for data collection

TECHNICAL PROJECTS

Deep Learning with Structures, UBC – EECE571F   **September, 2022 – December, 2022**
- Designed an integrated method including text detection, text recognition and text classification to help individuals process text on images
- Made some innovations on the training process, such as using ResNet's residual network instead of VGG for feature extraction in text detection, and adding an attention mechanism to text recognition

3D Modeling and Animation, UAlberta - CMPUT307   **January, 2022 – April, 2022**
- Discussed the application of 3D modeling and animation in games, virtual environments, and emerging video delivery algorithms in order to build the basic framework of the project
- Used computer vision related algorithms (2D/3D Geometric Transforms, PCA, Kmeans Clustering, etc.) and software (Blender) to animate skeleton-based models

Iris Dataset Classification, UAlberta - CMPUT466/566   **September, 2021 – December, 2021**
- Analyzed the characteristics of the iris dataset to choose the most suitable algorithms for the dataset
- Classified dataset by hyperparameter adjustment to implement training-verification-test infrastructure
- Obtained Cross Validation Accuracy, Negative Mean Squared Error corresponding to the selected machine learning algorithms (Baseline, SVM, Logistic Regression) to get intuitive experimental results

Mobile Library APP, UAlberta – CMPUT301   **September, 2020 – December, 2020**
- Implemented Java in Android Studio to design Android application for library readers to record loans and exchange book requests
- Realized the real-time loan request and acceptance with updates on book statuses in APP

MongoDB Database Management, UAlberta - CMPUT291   **September, 2020 – December, 2020**
- Adopted Entity-Relationship Model and SQL queries to manage edits to entries in database
- Published, retrieved and monitored edits to data through the existing database, and linked and transferred data to MongoDB by extracting terms and building index for data accessibility

ENGINEERING STUDENT TEAMS

Vision Team, University of Alberta RoboMaster Club   **September, 2019 – April, 2020**
Member of Vision Team
- Collaborated with likeminded peers of engineering students and improved teamwork ability
- Learned from the senior members about image processing technology to add visual functions to robot

VOLUNTEER EXPERIENCE

Edmonton's Food Bank, Edmonton, Alberta   **September, 2019 – October, 2019**
Community Volunteer
- Collaborated with volunteer team and distributed food to deliver the promise of combatting hunger and poverty within Edmonton's marginalized communities
- Greeted visitors for donating food and products to the charity society to increase food storage

AWARDS

Dean's Honor Roll   2019-2020, 2020-2021, 2021-2022
First Class Standing   2019-2020, 2020-2021, 2021-2022

PROFESSIONAL AFFILIATIONS

Engineers and Geoscientists British Columbia   2022 – Present
The Oriental Ceramic Society (London, UK)   2021 – Present

INTERESTS & ACTIVITIES

- Swimming, Skiing, Ping-Pang, Travelling, Shopping, Appreciation of Ceramic Products