Zejia Cai

Junior Application Developer

ZejiaCai01@gmail.com   (236) 967-1573   Vancouver, BC

Highly motivated and recently graduated software engineer with strong problem-solving skills and a commitment to excellence, eager to leverage academic knowledge and practical project experience to contribute effectively to a dynamic and collaborative team as an Application Developer at MineSense.

TECHNICAL SKILLS

- Proficient in **C/C++, C#, Python, Java**, Kotlin, SQL, and more
- Work experience with **serverless technologies**: Google Cloud Function, Google Cloud Run, and AWS Lambda
- Knowledge and hand-on experience with **microservices and event-driven architecture**
- Familiarity with **machine learning** libraries and frameworks such as TensorFlow, Keras, or PyTorch
- Experience with version control systems such as **Git**
- Proficiency in **Windows/Linux/Unix** operating systems and **shell scripting**
- Hand-on experience with **database administration, database installation and security**

TRANSFERRABLE SKILLS

- Good **communication and team management skills** by working in fast paced environments
- Strong **problem solving** and analyzing skills developed from coursework and self-learning projects
- Capable to **quickly learn** leading-edge technologies
- Tri-lingual in **English, Cantonese, and Mandarin**

WORK EXPERIENCE

SFU - CS Research Assistant

Jan 2024 - current   Burnaby, BC

- Designed and implemented a new software tool to help users to add human-interactive components to their 3D models
- Demonstrated problem-solving skills and ability to quickly learn and adapt to new technologies, including 3D models, C#, Rhinoceros, and Grasshopper
- Collaborated with a multidisciplinary team of graduate students to develop the software based on their needs
- Tested software for bugs and operating speed, fixing bugs and documenting processes to increase efficiency by 18%

PROJECTS EXPERIENCE

Educational Resource Website - Architect
Feb 2024 - Apr 2024

- Designed and developed a high availability and high scalability web system in Microservices Architecture using the Spring Boot framework
- Implemented the system to be deployed using serverless technologies: Google Cloud Run, and Google Cloud Functions
- Utilized load balancing and service discovery mechanisms with Nacos to allow the system to be deployed in a multi-region environment
- Adapted resiliency patterns to ensure fault tolerance and high availability

Rapid Medical Imaging Examination - Creator
Sep 2023 - Dec 2023

- Designed and built an AI-based multi-task detector website for medical image analysis
- Implemented a breast tumor classification tool and bone fracture classification tool. Also merged COVID-Net model into the platform to be a COVID detection tool.
- Collaborated with a team of 5 to ensure timely project delivery while adhering to best practices.

MyChat App - Creator
Dec 2022 - Apr 2022

- Developed the conceptual framework, functionality, and features of the app
- Implemented the backend services of the software using Kotlin and Firebase: notification service, cloud database, local database and communication system

Deny and Conquer Game - Creator
Jul 2023 - Aug 2023

- Implemented a multi-players game that built on a client-server architecture that uses TCP
- Designed the multi-threading architecture to handle multiple client connection and locks to manage shared resources

EDUCATION

Simon Fraser University - B.S., Computer Science

Sep 2019 - Apr 2024   8888 University Dr W, Burnaby, BC V5A 1S6

Relevant courses

- Web Systems Architecture - Serverless
- Data Communications and Networking
- Database Systems
- System Security and Privacy
- Software Development

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TO

Hiring Manager
MineSense Technologies Ltd
8508 Ash St
Vancouver, BC V6P 3M2
May 17th, 2023

Dear Hiring Manager,

My name is Zejia Cai (James) and I would like to express my enthusiasm for the Database Application Developer position within MineSense that's posted on Linkedin. I have been learning about MineSense and I am impressed by the company culture and commitments that MineSense has made to diversity, equity, and the environment. My passion for these principles aligns perfectly with MineSense's vision. Therefore I sincerely feel grateful to have this opportunity to apply to this job. I have proven my ability to accomplish hands-on tasks and solve unfamiliar problems, and I would be thrilled to use these skills to help the company to make positive change to the world.

During my research project at SFU, I designed and implemented a software tool for enhancing 3D models with human-interactive components, which honed my problem-solving and time management abilities , and allowed me to adapt rapidly to new technologies. This research project comprises engineering concepts, 3D models, C#, and RhinoCeros, which I had never learnt in my courses. However, I managed to learn all the unfamiliar concepts and finished the project in just 6 months while I was taking another four courses. Since the software tool is open sourced, therefore, therefore, I have ensured it is clean and maintainable, with comprehensive software documentation, as I typically do. During the project, my role required significant collabForation with a multidisciplinary team that defined requirements, design solutions and test functionality throughout the whole project, which prepared me to work effectively in your team's collaborative environment.

In addition to my research project experience, I have experience working with implementing software applications using C/C++, Python, Java and Kotlin. For example, I have learnt data structure in C++ and implemented a path finding software tool as the final course project. This software comprised three pathfinding methods leveraging multiple self-implemented data structure classes in C++. I also have a strong knowledge of database administration, database installation and security. For example, recently I have implemented the backend of a website as my final project on my Distributed System course. The backend services are designed to manage data in their databases and perform tasks. Moreover, I also deployed these databases on the cloud.

Additionally, my experience with version control systems like Git, along with my strong communication and problem solving skills will allow me to make significant contributions to your team. While most of my experience aligns with the job description, I haven't had the opportunity to work directly with Oracle Application Express in my previous experience. However, I am confident in my ability to rapidly acquire new skills and adapt to cutting-edge technologies. As a person who experiences many different cultures, I hope my experience can help MineSense to make more positive changes to the Earth. I would enjoy discussing with you more about my qualifications for this position. Thank you for your consideration and I am looking forward to hearing from you soon.

Sincerely,

Zejia Cai