Shengsong (Charles) Xu

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SKILLS SUMMARY

Technical
- Proficiency in the following programming language and skills, utilized to manage work and projects:
  - JavaScript (React) | Java (maven) | HTML | Python | C | Bash scripting | MySQL | NoSQL | GitHub
- Excellent skills in Cloud tools, created and worked with large VMs with 10T storage as a software developer in UTSC Library Digital Scholarship Unit.
- Understanding of CI/CD and container architecture (Docker), applied to develop and deploy Codebook.

Interpersonal
- Capable of quick and strong learning ability proven through a record of academic success and excellent feedback from the former employer.
- Strong ability to collaborate and communicate with diverse individuals of both technical and non-technical backgrounds, demonstrated through work in UTSC Library Digital Scholarship Unit.

EDUCATION

Candidate Honors Bachelor of Science, Computer Science *Co-op (CGPA: 3.9/4.0)*   2019 – 2023
University of Toronto Scarborough
- 2022 University of Toronto Excellence Award ($7500)
- Summer Undergraduate Fellowships in Critical Digital Humanities ($5000)

RELEVANT EXPERIENCE

Software Developer (Java | Maven | Spring boot)   Jan 2023 – Apr 2023
TD, TDS IT GTB, FILM
- Worked closely with senior developers on TD Liquidity Manager project, a secure web application that provides user with real-time access to information about their origination's intraday liquidity position, account, and transaction details.

Software Developer (Linux | Cloud | JavaScript | Python)   Jan 2022 – Sep 2022
UTSC Library Digital Scholarship Unit, MediaCat
- Optimized and developed a domain web crawler on multiple Linux Cloud services that allows scalable and fast crawling of news sites using Node.js and Python, applied multithreading to increase the crawling speed by 5 times, and greatly reduced the number of crawling errors.
- Develop a post-processor to analyze and visualize mass data from both crawlers using Python (Pandas)
- Researched and resolved the Linux temp directory out of memory problem when crawling over 1 million URLs by reallocating and remounting Cloud storage with Linux command and bash scripting.
- Worked closely with the team and took the initiative to give improvement ideas for the project, resolved all major problems and greatly advanced the project design, surpassed the employer's expectations.

PROJECTS

Codebook (JavaScript | React | Docker | Nginx | Agile | NoSQL)   July 2022 – Aug 2022
- Built codebook, a real time pair programming tool that allows users to work collaboratively and execute their code by creating or joining a codebook room.
- Deployed with docker and DigitalOcean. Built a reverse proxy to do TLS termination, load balancing and hide the backend server from the frontend.
- Implemented Oauth2 with GitHub to allow users to save code to their GitHub repo.

EXTRACURRICULAR ACTIVITIES

CDHI Conference Speaker   Sep 2022 – Sep 2022
- Presented at CDHI conference 2022 with Dr. Alejandro Paz for his research in Media Study.
- Discussed the technical challenges of building programming tools such as web scraper to help research.

HACK THE VALLEY HACKER   Oct 2022 – Oct 2022
- Built a search engine within three days that can compute and compare the sentiment for different twitter topics using advanced machine learning AI, like Cohere and SpaCy.