Sia Zeng

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Graduate of Computer Science with 4 years experience in working across software development & 3 years experience in bioinformatics research. Passionate engineer & thriving analyst with the ability to apply algorithm development to solve real-world research problems.

EXPERIENCE

Basis Technologies   Oct 2022 – Present
Software Engineer
- Built and maintain API microservices with Java Jersey framework, MySQL, MongoDB and Redis to support Demand-Side Platform for advertising inventory
- Participated in all phases of software development life cycle with analysis, design, development, testing, debugging and production

Ma Lab at the University of Waterloo
Research Associate   Jul 2021 – June 2022
- Built a software suite used for analyzing DIA mass spectrometric data sets with Java and HTML/CSS
- Designed a model for the retention time of protein in replicate runs

Shootz Tech (球秀)   Sep 2021 – Sep 2022
Full-Stack Developer
- Improved video auto-editing (basketball game highlight) using AI technologies
- Worked with stakeholders to develop product strategies and drove the R&D team through end-to-end product development, boosting yearly avenue by $98k

PROJECTS

MSTRACER - Peptide Detection Tool of Proteomics Data – Python, Java, ML
https://github.com/waterlooms/mstracer
- Designed a cutting-edge algorithm for peptide feature detection from DDA mass spectrometric data
- Applied ML techniques such as NN and SVR to improve the quality of results from 92% to 96.7%
- Achieved better results than the other tools such as MaxQuant & Dinosaur with an average of 2.2%
- Published in the Journal of Proteome Research https://pubs.acs.org/doi/10.1021/acs.jproteome.0c01029

ICU Discharge Assistance Web Tool – Python, JavaScript, HTML/CSS
- Extracted features of impact from the MIMIC-III clinical database; predicted ICU discharge time by applying ML techniques such as NN using Python; reached an accuracy of 87%
- Developed an interactive web tool for hospitals with JavaScript and HTML/CSS

EDUCATION

UNIVERSITY OF WATERLOO

M.S. in Computer Science (Bioinformatics Specialization)   Sep 2019 – May 2021

B.S. in Computer Science (Bioinformatics Option)   Sep 2015 – Apr 2019

TECHNICAL SKILLS

Languages: Java, Python, C++, C, HTML/CSS, JavaScript
Framework/Libraries: Tensorflow, Pytorch, Keras, Flask, Django, Maven
Tools: Postman, MongoDB, MySQL, AWS, Git, Docker, Nginx,

AWARD

Terminal AI Competition Waterloo vs CMU, First Place   Sep 2020
Terminal AI Competition Midwest Regional, Second Place   Apr 2021