CHENHAO LI

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EDUCATION

University of Michigan *Sept. 2018 - May. 2020*
Bachelor of Science in Computer Science Overall GPA: 3.98/4.0
Computer Science and Engineering, College of Engineering

Shanghai Jiao Tong University *Sept. 2016 - Aug. 2020*
Bachelor of Science in Electrical and Computer Engineering Overall GPA: 3.58/4.0
University of Michigan - Shanghai Jiao Tong University Joint Institute

TECHNICAL STRENGTHS

Computer Languages C/C++, Python, C#, Java, MATLAB, Verilog
Software & Tools Unity, Origin, LaTeX, Premiere Pro, MultiSIM, Mathematica, CAD

RESEARCH EXPERIENCE

University of Michigan Sept. 2019 - Dec. 2019
Researcher and Programmer: Numpy Real-time Helper Project

- Designed a helper interface for *Numpy* package in *Python* as an extension in *Vscode*
- Implemented real-time document showing for users working space
- Implemented some example demonstration pages with Html and Javascript
- Deployed *Vscode API* to support the implementation of the project

University of Michigan Feb. 2019 - Aug. 2019
Undergraduate Research: Variant Calling – GATK Project

- Improved the *bound check algorithm* for variant calling in GATK project to handle genotype likelihoods calculation with fixed-point numbers
- Implemented the *filter algorithm with bound check* for variant calling software to handle the low-qualities results with bound check algorithm before passing to likelihood calculation part
- Implemented the *bound version algorithm* for PairHMM likelihood calculation to handle likelihoods between read-haplotype pair with lowerbound and upperbound likelihood and output the correct results for genotype assignment
- Tested the correctness of *bound check algorithm* implemented in PairHMM likelihood calculation, and reduced the recomputation time consumption to 2.6 times of baseline algorithm
- Implemented the *multi-thread* for variant calling algorithm to construct a pipeline working mode to improve time performance of algorithm

EXPERIENCE

Major Design (Game Development), University of Michigan Oct. 2019 - Jan. 2020
Team Leader Main Programmer

- Designed a game of adventure genre and lead a group of four
- Implemented and designed enemy, scene assets mechanics and level progress
- Combined pixel arts with game assets and developed animation
- Attended Game Design showcase of UM Fall 2019 and achieved 7th/32 for audience voting

CSE Department, University of Michigan Jan. 2019 - May. 2019
Course Grader for EECS376

- Checked the assignment materials for students and correctness of assignment answers
- Performed high-quality grading process for assignments and gave detailed comments for work of students
- Gave Instructors effective feedback on assignment performance

VG100 Expo, UM-SJTU JI June. 2017 - August 2017
Team Leader and Main Engineer

- Designed the mechanic structure of *Intelligent table cleaner* robot
- Implemented the main structure of the robot including motor system and cleaning system
- Programmed the motor system with Arduino board and improved the cooperation between motor and cleaning systems

ACADEMIC AWARDS

UM-SJTU JI, 2016-2017 Undergraduate Scholarship

Enrolled in Dean List, UM-SJTU JI, for Spring Term in 2016-2017 academic year

Wu Jong-Sun Jie Scolarship for UM-SJTU JI excellent student in 2016-2017 academic year

EXTRA-CIRRUCULAR

Volunteer Teaching Team, UM-SJTU Dec. 2017 - Feb. 2018
Volunteer Teacher in Yunnan Province, China

- Volunteer teacher in KuangChang Primary School, LuXi town, Yunnan province
- All course teaching for the third grade students and designed extended classes for students
- Gave extra help for students with low-quality school performance
- Worked as reporter of college to record life in rural area of China

Student Union of SJTU Mar. 2017 - Sept. 2018
Senior officer in publicity department

- Designed posters for *Suipian Literature Competition*
- Served as an instructor of Photoshop, After Effects and Premiere Pro