

ZHIYI(ZOE) PAN

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EDUCATION

University of Michigan, Ann Arbor, MI Bachelor of Computer Science <i>Selected Coursework:</i> Advanced Compilers; Program Synthesis; Introduction to Operating Systems; Compiler Construction; Programming Languages; Shanghai Jiao Tong University, Shanghai Bachelor of Electronic and Computer Engineering	Aug. 2019 - May. 2021 GPA: 3.84 Sept. 2017 - May. 2021 GPA: 3.55
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SKILLS

Proficient in OCaml, ReasoML, C/C++, HTML/CSS/Javascript; Experience in jQuery, vue.js, Python (Django), nginx.

RESEARCH EXPERIENCE

Research Assistant, prof. Cyrus Omar , University of Michigan - Future of Programming Lab · Worked on a paper for a gradual bidirectional typing inference system - type hole inference. · Developed undo/redo and history recording features for Hazel, a live functional programming environment featuring typed holes. · Designed and implemented a history panel, which was used for EECS 490 teaching work in UM.	Nov. 2019 - present
Research Assistant, prof. Scott Mahlke , University of Michigan · Learnt and wrote optimization path by LLVM. · Implemented genetic algorithm to find optimized combination of flags for gcc.	May 2020 - Jul. 2020

PROJECTS

Compiler for Decaf, EECS 483 Compiler Construction · Implemented a full-stack compiler for Decaf from lexical analyzing to code generation with clear static, link and run-time error reporting. · Optimized compiler by register allocation improvement, dead code elimination, constant folding, subexpression elimination, constant propagation and forward copy propagation.	2019 Winter
Network File System, EECS 482 Operating System · Implemented a file system featuring encryption, authentication, failure tolerance and concurrency.	2019 Winter
Online Visual Novel, SJTU Network and Information Organization · Implemented a visual novel featuring multiple story lines and endings, shopping store, archiving, achievement, HP systems. · Designed and built front-end pages (Html/CSS/JS). Developed the back-end by Django, created database model and deployed it in the cloud server (Ubuntu).	February 2019 - May 2019

ACADEMIC EXPERIENCE

Instructional Aide, EECS 490 Programming Languages , University of Michigan · 100-student upper level technical elective course. · Duties include holding office hours and teaching in every-week discussion session.	2020 Fall
Author, ICFP 2020 , Student Research Competition Track · Won bronze medal in the student research competition. · Submitted an extended abstract, <i>Type Hole Inference</i> , participated in the poster session and communicated with ICFPers. · Made a presentation on the final talk session.	Aug. 2020

AWARDS

Bronze, ICFP 2020 , Student Research Competition	Aug. 2020
Champion, 12th Annual VEX U Robot Skills Challenge World Championship , Louisville, US	Apr. 2019
Champion, VEX Robotics Asia Open , Zhejiang, CN	Feb. 2019
Robot Awards, Summer Design Expo Best Technology Award , UM-SJTU JI	Nov. 2018
Scholarship, Undergraduate Excellent Scholarship , Shanghai Jiao Tong University	2017-2018