

ZHIYI(ZOE) PAN

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EDUCATION

University of Michigan, Ann Arbor, MI

Aug. 2019 - May. 2021

Bachelor of Computer Science

Selected Coursework: Advanced Compilers; Program Synthesis; Introduction to Operating Systems; Compiler Construction; Programming Languages; GPA: 3.84

Shanghai Jiao Tong University, Shanghai

Sept. 2017 - May. 2021

Bachelor of Electronic and Computer Engineering

GPA: 3.55

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 Nov. 2019 - present

- 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.

Research Assistant, *prof. Scott Mahlke*, University of Michigan

May 2020 - Jul. 2020

- Learnt and wrote optimization path by LLVM.
- Implemented genetic algorithm to find optimized combination of flags for gcc.

PROJECTS

Compiler for Decaf, *EECS 483 Compiler Construction*

2019 Winter

- 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.

Network File System, *EECS 482 Operating System*

2019 Winter

- Implemented a file system featuring encryption, authentication, failure tolerance and concurrency.

Online Visual Novel, *SJTU Network and Information Organization*

February 2019 - May 2019

- 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).

ACADEMIC EXPERIENCE

Instructional Aide, *EECS 490 Programming Languages*, University of Michigan

2020 Fall

- 250-student upper level technical elective course
- duties including holding office hours and lab teaching

Author, *ICFP 2020*, Student Research Competition Track

Aug. 2020

- Won bronze medal in the student research competition.
- Submitted an extended abstract, *Type Hole Inference*, participated in the poster session and communicated with ICFPers.
- Made a presentation on the final talk session.

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