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# Hilbert Chen

## Education

- 2021–2023 **BS(in progress), Computer Engineering**, *University of Michigan*, Ann Arbor  
GPA: 3.92/4.0
- 2019–2023 **BE, Electronic and Computer Engineering**, *Shanghai Jiao Tong University*, Shanghai  
GPA: 3.66/4.0

## Publications

- 2021FA **A-ESRGAN: Training Real-World Blind Super-Resolution with Attention U-Net Discriminators**, *arXiv:2112.10046*
- Our team introduces the Attention U-Net discriminator architecture into GAN framework for the first time. Our model achieved state-of-the-art performance on blind super-resolution tasks compared to all prior work, and an interpretation of the improvement brought by attention module is also given in the paper

## Experience

- Current **Student Researcher**, *UMich FP-Lab*  
Working on building a run-time system and compiler for Hazel – a live functional programming language featuring typed-holes.
- 2021SU **Student Developer**, *ISCAS SoC Program*  
Delivered features in the optimization pass of the ML compiler using MLIR and Cpp. Implemented features including involution-Op-elimination, constant-folding on the computational graph of a NN model.
- 2021SU **Teaching Assistant of VE270(Intro. to Logic Design)**, *SJTU*  
Worked with teaching staff of VE270(Introduction to logic design), a 150+ student course on the main CS program track. Helped students understand concepts and complete the assigned coding projects through weekly office hours. Conducted weekly lab sections to reinforce student practical ability and verify their logic designs on FPGA. Taught weekly recitation sections to reinforce conceptual understanding and review course material covered in lecture. Collaborated with Prof. Gang Zheng to elevate the student experience.
- 2020FA **Student Researcher**, *SJTU DA-Lab*  
Worked with Prof. Xubo Yang and lead a team of students from the Software Dept. of SJTU to design a remote avatar robotic system featuring immersive VR experience.
- 2020SU **Team Leader & Developer**, *Game-dev Project*  
Developed a web-based 3D puzzle game using Elm and WebGL. Learned the paradigm of functional programming and the design pattern of MVC through the process.
- 2020SU– **Leader of Tech-JI**, *Student Union*  
Lead a group of engineering students and provided technical support in **Git**, **LaTeX**, **NAND Flash Workshop**.

2021SP– **Project Mentor**, *Illume Research*

Trained student skills in academic writing with series lectures, and provided mentorship for students to decide on research topic and conduct introductory research projects.

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## Technical Skills

### Experienced With

Languages C++, CUDA, ELM, Python  
Technologies Linux,  $\LaTeX$ , Git, Emacs, Vim

### Have Experience With

Languages ReasonML, OCaml, Typescript, Verilog  
Technologies React.js, React-Native, MongoDB, Redis, FastAPI

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## Relevant Courses

### Computer Science

EECS545 Machine Learning(A)  
EECS490 Programming Languages(audit)  
EECS498 Parallel Programming w/ GPUs(A)  
EE282 Computer Architecture(in progress)  
AI005 Applied Deep Learning  
EECS370 Computer Organization(in progress)  
EECS281 Data Structure and Algorithms(in progress)  
VE280 Intro. to Data Structures(A+)  
VE270 Intro. to Logic Design w/ FPGA(A)

### Engineering Fundamentals

VE401 Probability and Statistics  
VE216 Signals and Systems  
VE203 Discrete Mathematics  
VY100&200 Academic Writing(A)  
VG100 Intro. to Engineering(A)  
VG101 Intro. to Programming(A+)

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## Honors

Scholarship 2021-2022 Lum&Muriel Scholarship  
Scholarship 2020-2021 Liming-Yu Scholarship  
Scholarship 2019-2020 Undergraduate Excellence Scholarship

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## Activities

2020SU **Volunteer**, Volunteering Work, Shanghai  
2020 Shanghai International Marathon.