Yilin Li

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Education Background

- **University of Michigan - Ann Arbor** — MI, USA
  Master of Science in Electrical and Computer Engineering (Minor: Computer Vision) — *Sep 2021 - Apr 2023*
  GPA: 4.00/4.00
  Courses: Data Manipulation and Analysis, Machine Learning, Computer Vision, Database Application Design

- **Zhejiang University** — Hangzhou, China
  Bachelor of Engineering in Electronic Information (Minor: Information Engineering) — *Sep 2017 - June 2021*
  GPA: 3.68/4.00 (**Major:** 3.82/4.00)
  Courses: Numerical Analysis Methods, Digital Image Processing, Data Analysis and Algorithm Design, Computer Organization and Design, Wireless Network Application

Skills Summary

- **Programming Languages**: C/C++, Python, Java, JavaScript, HTML, CSS, Shell, SQL, Julia, Verilog, MATLAB
- **Tools & Frameworks & Platform**: Git, Linux, PyTorch, TensorFlow, Django, React, Flask, Pandas, AWS, Docker, MongoDB, FPGA

Related Experience

- **Huawei Hangzhou Research Institute** — Hangzhou, China
  Software Development Engineer Intern — *July 2020 - Aug 2020*
  - **Code Optimization**: Reduced the cyclomatic complexity of 25+ functions. Updated project dependencies to the latest versions and fixed several conflicts.
  - **Compiler Bug Fix**: Successfully located and solved the failure of 10+ test cases using the GDB debugger.
  - **New Feature Development**: Learned LLVM basics and developed a new pass to estimate compilation time.

- **Tokyo Institute of Technology** — Tokyo, Japan
  Summer School — *July 2019*
  - **Assemble Program and Analysis**: Implemented and optimized various functions of a basic calculator.
  - **FPGA-implemented Applications**: Implemented a multi-machine interactive chat program and a chess game program.

Research and Projects

- **Personal Website Template Built with React (JavaScript, React, HTML, CSS)**:
  ◦ Developed a modern and responsive personal website template using React, HTML, CSS, and JavaScript.
  ◦ Implemented reusable components and optimized the website for improved performance.
  ◦ Integrated various features such as navigation, contact forms, and portfolio sections to showcase projects and skills.
  GitHub: https://github.com/Phantom-eva/portfolio

- **A Compiler For The COOL Programming Language (C++, Cool)**:
  ◦ Designed and implemented a compiler for the COOL (Classroom Object-Oriented Language) programming language.
  ◦ Developed lexical analysis, syntactic analysis, semantic analysis, and code generation phases.
  ◦ Successfully compiled the COOL high-level language to MIPS assembly and executed on SPIM, the MIPS simulator.
  GitHub: https://github.com/Phantom-eva/Compiler

- **Multiplayer Gobang Based on Reinforcement Learning (Python, Reinforcement Learning, Transformer)**:
  ◦ Developed a multiplayer Gobang (also known as Five in a Row) game using reinforcement learning techniques.
  ◦ Utilized reinforcement learning algorithms, such as deep Q-learning, to train an AI agent to play Gobang.
  ◦ Evaluated the AI agent's performance against human players and assessed its learning capabilities and gameplay effectiveness.
  GitHub: https://github.com/Phantom-eva/AlphaZero_Gobang_3player

- **Image Inpainting Using GAN, Partial Convolution And Region Normalization (Python, Computer Vision, GAN, PyTorch)**:
  ◦ Developed an image inpainting system using state-of-the-art techniques including Generative Adversarial Networks (GAN), Partial Convolution, and Region Normalization.
  ◦ Demonstrated the effectiveness of the system through extensive experimentation and evaluation on diverse datasets.
  GitHub: https://github.com/Phantom-eva/image_inpainting

Honors and Awards

- Outstanding Graduate of Zhejiang University - 2021
- Meritorious Winner in Mathematical Contest in Modeling - 2020
- University Student Scholarship of Texas Instruments - 2019
- Outstanding Volunteer of Zhejiang University - 2019

Other Experience

- **Volunteer teacher in elementary school** — Jinhua, China
  Taught more than 30 students science and managed the daily affairs of the class — *Summer 2018*