




Kexuan (Michael) Huang

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EDUCATION

- University of Michigan (GPA: 3.9/4)** Ann Arbor, MI
Master of Science Student in Information Science (Software Development Track) Aug 2022 - May 2024 (Expected)
- University of Wisconsin-Madison** Madison, WI
Exchange Student in Computer Science Jan 2022 - May 2022
- Shanghai Jiao Tong University (UM-SJTU Joint Institute)** Shanghai, China
Bachelor of Engineering in Electrical and Computer Engineering, Minor in Computer Science Sep 2018 - Aug 2022








TEACHING EXPERIENCE

- University of Michigan**
 - Graduate Student Instructor (GSI)** for course *Data-Oriented Programming (SI206)*  
 - Worked with a team of 16 people to coordinate 300 students to reinforce course concepts such as *Python*, *SQL*, data structure & algorithm, object-oriented programming, database management, API, file system and data analysis & visualization.
 - Taught 2 lab sessions and held 2 in-person office hours per week to reinforce technical concepts and tutor coding projects. Made a series of lab slides with \LaTeX and *Beamer*, which is more than 200 pages in total along with practice problems. 

WORK EXPERIENCE

- Valeo** Troy, MI
Software Engineer Intern Jun 2023 - Aug 2023
 - Developed programs in C-based programming language Communication Access Programming Language (*CAPL*) for automated-parking testing. Utilized distributed systems design tool *CANoe* to validate electronic control unit (*ECU*) network signals and virtual testing environment *Vosstrex* to simulate vehicle behaviors under diverse scenarios.
 - Implement an image processing algorithm in *C++* with Open Graphics Library (*OpenGL*) to efficiently handle real-time raw video streaming from vehicle cameras placed at varying angles, ensuring adherence to strict specifications.
 - Built *Jenkins* *CI/CD* pipelines with *Dashing* framework for multiple projects, triggered upon codebase changes in application lifecycle management (*ALM*) system to automate project build, code analysis on *Klocwork*, testing and hardware validation.
- AMD** Shanghai, China
Software Engineer Intern Dec 2020 - May 2021
 - Developed a static analysis plugin with *C++* and *Python* for hardware description language (*HDL*) (e.g. *VHDL*, *Verilog* and *SystemVerilog*) to parse source code, extract user-defined components (e.g. ports, modules and interfaces), conduct cross-validation among files and generate bug reports, which notably accelerated the routine design verification process.
 - Implemented an internal team platform with *Django* framework in *Python* on the local area network (*LAN*), which enables seamless information sharing and workflow synchronization among colleagues in office. Developed various frontend views including dashboard, to-do list, worksheet and Q&A, using *JavaScript*, *HTML*, *CSS* along with framework *Bootstrap*.
 - Revised and modernized legacy *Perl* and *Ruby* code with *Python* and *Shell* scripting, employing packages including *Requests*, *Regex*, *Pandas*, *NumPy*, and *Sklearn* to establish a cohesive GPU test flow for efficient large-scale data process and analysis.
- Segway** Shanghai, China
Software Engineer Intern Jan 2020 - Mar 2020
 - Developed an onboard debug assistant in *C* using *FreeRTOS* for service mode of autonomous delivery robot prototype, facilitating real-time access to parameters and settings. Implemented structured folder-like view with bitmap graphic, efficient interaction logic using only few buttons, and utilized *UART*, *Bluetooth* & *Wi-Fi* for seamless log exporting solution.
 - Implemented test programs for host computers & STM micro-controllers in *C* and *Python* scripting. Performed comprehensive unit tests for communication modules and integrated tests for decision-making systems in both PC emulator and real life.

PROJECTS

- ChatGPT on WeChat**    (GitHub 610 stars, 300 forks, 2.2k users and more)
Open-source Project | **TypeScript, Node.js, Asynchronous Programming, Docker, CI/CD, Rapid Cloud Deployment**
 - Integrated ChatGPT into WeChat (the most popular social media in China), enabling keyword-triggered auto-reply for group & private chat, along with customized task handlers, facilitating productivity and user experience with the cutting-edge AI.
 - Leveraged *TypeScript* asynchronous programming to seamlessly handle incoming chat messages and forward responses from GPT-3.5 or GPT-4 models through the integration of *Wechaty* (an open-source project on GitHub) and the OpenAI API.
 - Released a deploy template on cloud platform *Railway* by streamlining the build & deploy process with *Docker*, which currently ranks Top 1 in chatbot popularity with over 2.2k users. Actively resolved over 60 issues on GitHub. 
- Intelligent Firefighting System Based on Internet-of-Things (IoT) Technology**  
Capstone Project, Full-stack Developer | **Python, TypeScript, FastAPI, React, React Native, MongoDB, Docker, CI/CD**
 - Built a fire risk management system incorporating Fuzzy Analytic Hierarchy Process (*FAHP*) and Coupling Revision  to enhance accuracy and efficiency, which was successfully deployed on government servers in Shanghai for a trial run.
 - Developed the backend with *FastAPI* framework, web App with *React.js* and cross-platform mobile App for iOS & Android with *React Native*. Utilized *MongoDB NoSQL* database to handle a substantial data volume of approximately 7 million.

SKILLS

- Programming:** Verilog, Assembly (x86), C, C++, Java, Python, MATLAB, TypeScript, HTML, SQL, R, Shell, \LaTeX
- Development:** Git, GitHub, Docker, RESTful, React, Django, Hadoop, Spark, Drill, Vim, VS Code, macOS, Linux
- Specialty:** Badminton (former professional athlete, current UMich team player), Anime Piano