

Jiahui (Kary) Wang

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EDUCATION

Major Math & Computer Science

Minor Physics, Music

GPA 3.96 / 4.00

UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Bachelor of Science

Aug 2019 - **May 2023**

LAS Honors

- James Scholar & Deans List

SKILLS

- C++/C, Python, Go, Java, Haskell, Kotlin
- SQL, MongoDB, Neo4j, Redis
- HTML, CSS, JavaScript, React, TypeScript, Angular, Node.js, Figma

COURSES

System Programming

Algorithms & Data Structure

Web Programming

Database Systems

Machine Learning for Signal Processing

Autonomous Driving

Programming Languages & Compilers

Numerical Analysis

Computer Architecture

Quantum Computing

PATENTS

Distance estimation for quantum data.

Chinese Patent No. 202111301698.7,

filed Nov 4, 2021. Patent Pending.

AWARDS

CS498 Project Competition - Engineering Excellence Award

- Using **React**, **Typescript**, **Express**, **MongoDB**, design and developed a roommate matching web app

Winner of MechMania Hackathon

- Using **Java**, developed a strategy to play in the game **AI Hackathon**

Winner of CS125 Project Competition

- Using **Java**, developed an **Android app** to organize office hour queue

EXPERIENCES

Software Engineer Intern — TikTok Inc.

May 2022 - August 2022

- Developed backend RPC services and HTTP APIs using **Golang**, Thrift, and message queue for TikTok App, including paid content ratings and paid videos' music compliance scanning services
- Worked together with the members of "middle-end" team, "server-arch" team to ensure the robustness of the data exchange and API calling between the RPC service and the common services of ByteDance

Software Engineer — Improvising

Sep 2021 - May 2022

- Developed music technology products, including
 - *Improvising Studio* (<https://studio.improvising.io>) — an online digital music workstation, developed using **React** and **Typescript**
 - *Sound of Life* — an open source web app, which allows users to input a DNA sequence and get unique MIDI-synthesized audio stream on the web, developed using **Python** and **Flask**
- Researched on Music **Information Retrieval**, including machine learning algorithms for chord recognition and chord segmentation, written into research paper

Research and Development Intern — Baidu, Inc.

June 2021 - August 2021

- Developed Paddle Quantum (<https://qml.baidu.com>), a quantum machine learning toolkit that supports the construction and training of quantum neural networks
- Researched on Renyi Divergence of quantum states and filed a patent

PROJECTS

Run Music - A Running Music App

August 2021 - Present

- Using **MySQL**, **Typescript**, **React**, **Node.js**, and **Figma**, developed a web app that generates personalized music playlists to match users' running pace with music tempo to get them better training and higher motivation
- Leading team on market research, UI/UX design, database design and software development

Autonomous Vehicle

May 2022

- Using **Python**, **ROS**, **LaneNet**, **YOLOv5**, implemented and tested vision-based algorithms on lane detection and emergency stop
- Ran program with GEM electric vehicle on road and tune parameters according to real world performance and feedbacks

LEADERSHIP

Course Assistant @ CS374 Algorithms

Jan 2022 - May 2022

- Helped students in office hour to design algorithms and solve problems

Co-President @ Open Source At Illinois Club

May 2020 - May 2021

- Hosted software development seminars and led members to contribute to our course management app and more **open source** projects