Yuhua Weng

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EDUCATION

University of Illinois - Urbana Champaign *Champaign, IL*
Master's in Computer Science May 2025
Bachelor's in Computer Science | GPA: 3.97/4.00 May 2024

Extracurriculars & Honors: Dean's List (every semester), Association for Computer Machinery (ACM)

PROGRAMMING SKILLS

Languages: Python, C, C++, C#, Java, Go, JavaScript, HTML, CSS
Technologies: PyTorch, TensorFlow, OpenCV, React.js, SQL/MySQL, MongoDB, Neo4j, Git/GitHub, Tableau, Pandas, NumPy, Docker, Kubernetes, CI/CD, Spark, Hadoop

PROFESSIONAL EXPERIENCE

Zhejiang Baoxing Smart City Construction Co., Ltd. *Ningbo, China*
Software Engineer Intern 06/2024 – 08/2024

- Developed and deployed visual models for detecting fire, swimming, and fishing using **Python, OpenCV, and Linux fundamentals**, leveraging YOLOv8 and public datasets on a 3090 Ti GPU on CUDA environment, leading to accuracy of 95%.
- Conducted data analysis using **Python** and **Pandas** to develop a model that accurately identifies rental contracts with abnormal rent prices, greatly reducing manual effort and enhancing efficiency.
- Developed and implemented efficient web scraping solutions in Python, utilizing APIs to gather high-quality images of six distinct scenes from diverse online sources, optimizing data acquisition for model training.

Caesar Research Group at UIUC *Champaign, IL*
Research Assistant 04/2023 – Present

- Contributed to the development of perpleweave.org, a dynamic full-stack web application designed to enhance networking opportunities among researchers attending academic conferences.
- Collaborated closely with cross-functional teams, working alongside UI/UX and Data Science team members, to design, build, and consistently improve the web app's functionality and user experience using **React.js**.
- Facilitated the analysis of SIGCOMM coauthorship datasets by extracting a list of the number of coauthors for each paper published for a year and total number of unique researchers for a given year using **Python**.
- Created coauthorship graph visualization using **NetworkX** Python library.

SELECTED PROJECTS

Flight Tickets Booking System 06/2022 – 08/2022

- Spearheaded the design and development of the web application's frontend using **React.js, HTML, CSS, JavaScript**.
- Implemented full CRUD (Create, Read, Update, Delete) operations for the passenger database with **MySQL** on backend, optimizing data management and accessibility, with seamless integration into Google Cloud Platform.

Open Flights 10/2021 – 12/2021

- Utilized **C++** to implement BFS Traversal and Dijkstra's Algorithm on the OpenFlight dataset, finding the shortest path between airports. Optimized travel route planning by 30%.
- Developed a Degree Centrality Algorithm to identify and rank the busiest and most popular airports globally.

TEACHING EXPERIENCE

University of Illinois - Urbana Champaign *Champaign, IL*
Course Assistant, CS 411 (Database Systems) 01/2024 – 05/2024

- Spearheaded the facilitation of database systems concepts such as MySQL, MongoDB, Neo4j, query optimization to over 400 students. Excelled in providing individualized support and real-time assistance, showcasing strong written and verbal communication skills.

University of Illinois - Urbana Champaign *Champaign, IL*
Course Assistant, CS 124 (Intro to CS) 01/2021 – 05/2021

- Provided valuable assistance to students in mastering **Java programming**.
- Conducted 3-4 hours of office hours weekly, offering dedicated support to students seeking clarification and guidance.