Youyou Zhang

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EDUCATION

B.S. in Computer Engineering, Purdue University, GPA: 3.83/4.00 | *West Lafayette, IN* **08/2018 - 05/2022**

M.S. in Computer Science, University of Illinois at Urbana-Champaign, GPA: 3.88/4.00 | *Champaign, IL* **08/2022 - 05/2024**

Languages: C, C++, C#, Java, Python, JavaScript, CSS, HTML, SQL

Tools: MongoDB, MySQL, Android, React, Express, Node, Rest API, ARKit, Unity3D, Unreal Engine, Pandas, Git, Figma, Azure

Publications: "LearnIoTVR" (ACM CHI 2023, Honorable Mention, top 5%), "MechARspace" (ACM UIST 2022)

WORK EXPERIENCE

Brunswick Corporation – *Computer Graphics Software Developer - Champaign, IL* **09/2023 – 08/2024**

- Presented the concept boating experience developed using **Unreal Engine 5** at CES 2024, highlighting features like autodocking, AI-driven UI design with voice assistant, and enhanced environmental awareness, aligning with the latest developments in autonomous boats.
- Streamlined UI development process in Unreal Engine using **C++** to create reusable UI component and incorporate middleware, separating frontend design from backend logic.
- Collaborated with UX teams to translate **Figma** designs into Unreal Engine for various fidelity iterations.

Brunswick Corporation – *Mixed Reality Software Developer - Champaign, IL* **05/2023 – 09/2023**

- Developed **Python** scripts to automate the autodocking simulation with **Unreal Engine** and **C++** that projects virtual obstacles on cameras to mirror real-life docking scenarios.
- Conducted AR proof of concept utilizing **ARKit, RealityKit, Unreal Engine,** and **Xcode** to explore varied development stacks and validate AR applications in water-related scenarios, showcasing its potential across diverse use cases.
- Presented a demo and documented analysis results showcasing the use of **PyTorch3D** and **OpenCV** to simulate AR objects overlayed over camera footages.

PROJECTS

Illini Home – *Full Stack Developer – jennzhang93.github.io/portfolio/#fullstack* **10/2022 - 12/2022**

- Developed and maintained a web application for UIUC students to search off-campus apartments utilizing **React.js**, **Node.js**, **Express.js**, and a relational **SQL** database hosted on the **Google Cloud Platform**.
- Created the user interface that supported account management, house listing creation, search functionality with multiple filters, and review submission for a listing, using **React Bootstrap** and **Material UI**.
- Utilized **Axios** for efficient data fetching and developed **RESTful** APIs with **CRUD** functionality for communication between the server and the client using Node.js and Express.js.

Heat Pump Efficiency Dashboard – *Data Visualization* **02/2024 - 03/2024**

- Developed an interactive dashboard using **Shiny** to assess heat pump installation viability based on city weather conditions.
- Utilized Open-Meteo's Weather API with **Numpy** for efficient data processing, extracting and analyzing minimum daily temperatures relevant to user-defined locations and date ranges.
- Incorporated an open-sourced Machine Learning algorithm **Prophet** to forecast time-series data for heat pump performance trends, offering users predictive insights into potential system efficacy.

Android Weather UI App - Android Developer **04/2024 - 05/2024**

- Created an Android weather app using **Java** that fetch data from Open-Meteo's Weather API and visualize data using **XML**.

VOLUNTEER

One Community Global – *Full Stack Developer - Remote* **04/2024 - Current**

- Volunteered as web developer on a 200-member team for an NGO open source project at a global sustainability organization.
- Reviewed approximately 40 pull requests from frontend and backend GitHub repositories.