

Yuxuan (Jack) DONG

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EDUCATION

Carnegie Mellon University

Pittsburgh, PA

Master of Science in AI Engineering, GPA: 3.89/4.0

Sep 2023 - Dec 2024

University of Wisconsin-Madison

Madison, WI

Bachelor of Science in Computer Science, GPA: 3.87/4.0

Sep 2019 - May 2023

Related Courses: Artificial Intelligence algorithms, Deep Learning, Computer Vision, Speech Recognition, Virtual Reality, Operating Systems, Computer Graphics, Database Management Systems, Algorithm

TECHNICAL SKILLS

Programming Languages: Python, Java, C#, JavaScript

Web Development & Databases: Spring, React, Node.js, PostgreSQL, AWS (EC2, RDS), GCE, Unity

WORK EXPERIENCE

Carnegie Mellon University - Human Machine Teaming Lab

Pittsburgh, PA

Software Engineer on Game Development

Sep 2023 - Present

- Researched the human-AI-teaming by designing a multiplayer adventure game using Unity and C#, allowing human to cooperate with AI and conquer a series of dungeon-like levels.
- Constructed networking feature using Photon Library, allowing multiple players to team up.
- Developed an API for AI and hosted on a headless server instance to control AI players.
- Hosted a Hackathon competition in Georgia Tech with over 20 AI developers joined and competed on creating AI agents for this game. The result was presented during IEEE Conference on Game 2024.

Wisconsin Institute for Discovery

Madison, WI

Software Engineer on Game Development

Sep 2021 - May 2023

- Built and deployed 2 games on Oculus Quest 2 VR headset using Unity using hand gestures to provide maximum level of immersion for players.
- Deployed scanned biology model to CAVE system using Unity and C#, and created a panoramic view of a plant cell, allowing researchers to examine the scanned model in close range.

PROJECTS

BiteBuddy: Full-Stack Food Ordering Web Application based on Spring Boot and React

- Hosted a PostgreSQL database that stores data related to customers, menus and restaurants. Handled the database using Spring Data JDBC.
- Designed a Restful API using Spring Controller, enabling key features such as logging in, menu browsing, ordering and checkout.
- Implemented a session-based authentication system using Spring Security.
- Constructed a user-friendly frontend UI using Ant Design library and React platform.
- Deployed the final product on AWS: Set up the database on AWS RDS, pushed the containerized project image to AWS ECR, and mounted the application using AWS App Runner.

AI Secretary: Web-Based AI Q&A Application for PDF Document

- Constructed a Retrieval-Augmented Generation pipeline based on Langchain framework and Open AI's gpt-3.5-turbo API. Built an AI Agent that reads PDF documents and answer user's question accordingly.
- Designed an interactive UI using React and Ant Design. Allowing user to upload PDF files and chat with AI agent seamlessly.
- Enabled voice chatting with AI agent using React speech recognition and speaktts text-to-speech API.
- Implemented clean Restful APIs using Express and Node.js to connect frontend and backend.